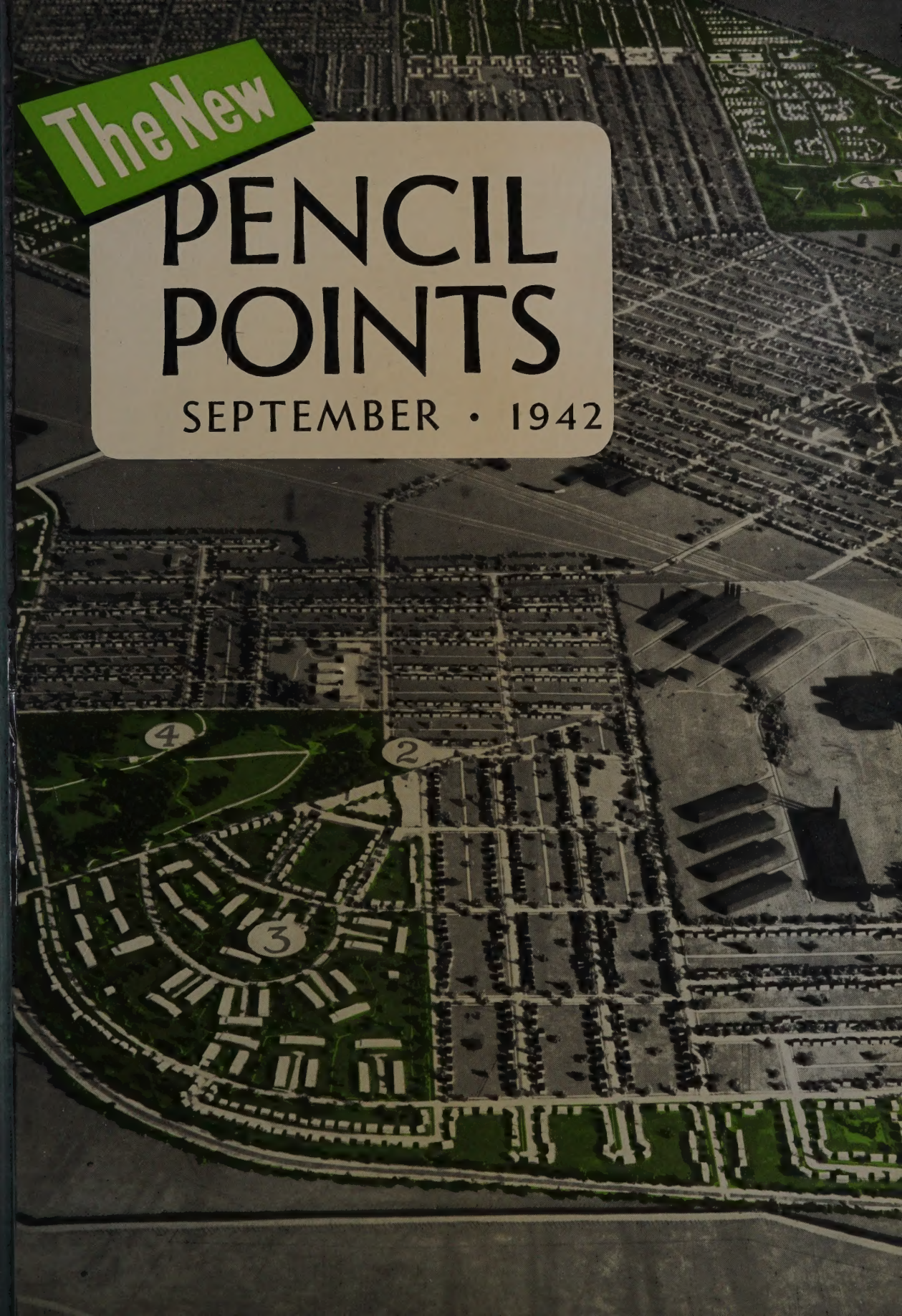


The New

PENCIL POINTS

SEPTEMBER · 1942

An Architect-Engineer Reviews

Many Years' Experience With

OIL BURNING EQUIPMENT

C. H. Higginson is a member of the firm of Wm. Higginson & Son, New York Architects and Engineers, who have long been identified with outstanding buildings throughout the East and who are now planning many million dollars' worth of war construction. Mr. Higginson is one of the first users of Petro Oil Burning Systems. Included in his Petro jobs are such buildings as the Conde Nast Printing Plant in Stamford, Connecticut, and four George Loft Markets throughout Westchester County, New York. He expresses these opinions concerning Petro Burners:

> "Our experience with the use of Petro equipment extends over 15 years and gives us adequate reason to say that it is absolutely reliable, precise in operation, and that it cuts down fuel and labor costs . . . Like most architects and engineers, we are now confining our efforts to war building. We consider it highly praiseworthy to know that the skilled services of such concerns as Petroleum Heat & Power are available for the production of maximum efficiency and economy for firing equipment in war industries."

Petro Oil Burning Systems

are available only—"for duration", on orders carrying high preference ratings.

BUT—

Petro service, parts for necessary maintenance, and engineering consultation and services, are still fully available.

AND—

hundreds of Petro Oil Burning Systems are meeting unprecedented steam demands in war production plants everywhere;

—24 hour operation, far above normal ratings, day after day, week after week;

—a "break down" test on a gigantic scale which Petro equipment is meeting efficiently, economically, reliably, and without breaking down because ample reserve strength and wear has always been built into Petro.

In addition to being proud of such performance, we think it is a good thing for specifiers to remember against the time when conditions again permit the free selection and installation of normal industrial and commercial firing equipment.

OIL IS AMMUNITION
USE IT WISELY

Full data on Petro Industrial Burners are in our Catalog in Sweet's Catalog file—or we will gladly send copies on request.

PETRO
Cuts Steam Costs

PETROLEUM HEAT AND POWER COMPANY

STAMFORD ***—Makers of good Oil Burning Equipment since 1903—*** **CONNECTICUT**

THE NEW PENCIL POINTS, published monthly by Reinhold Publishing Corporation at East Stroudsburg, Pa. Publication office, East Stroudsburg, Pa. Editorial and Advertising Offices, 330 West 42nd Street, New York, N. Y. Yearly subscription $3.00, single copies 50 cents. Entered as second class matter, July 8, 1941, at the Post Office, East Stroudsburg, Pa., under the Act of March 3, 1879. Volume XXIII, No. 9, Dated September 1942.

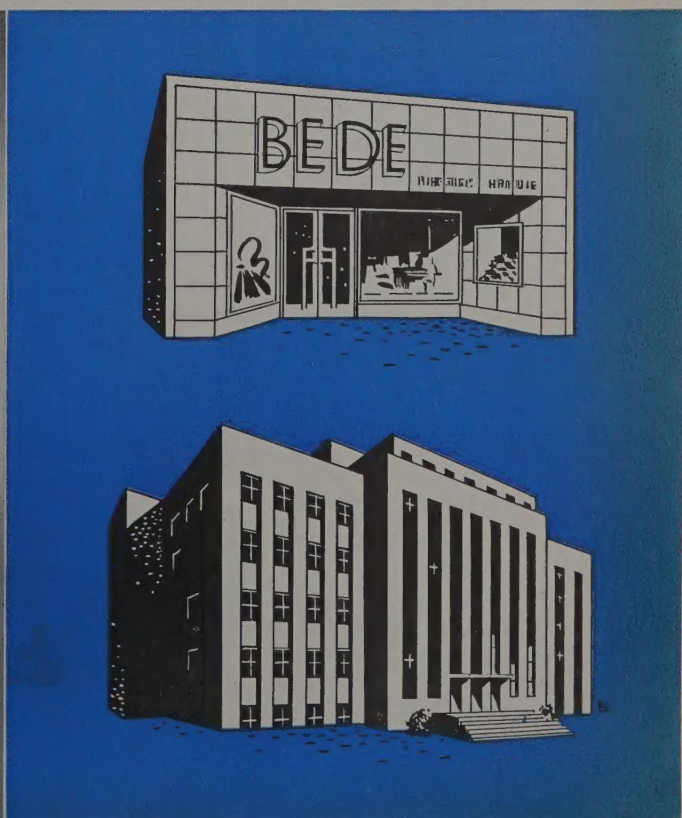
WAR WORK
TODAY—

Kawneer

The Kawneer Company, Niles, Michigan—Manufacturers of Rustless Metal Store Fronts, Doors, and Aluminum Windows.

STORE FRONTS, ALUMINUM DOORS AND WINDOWS
TOMORROW

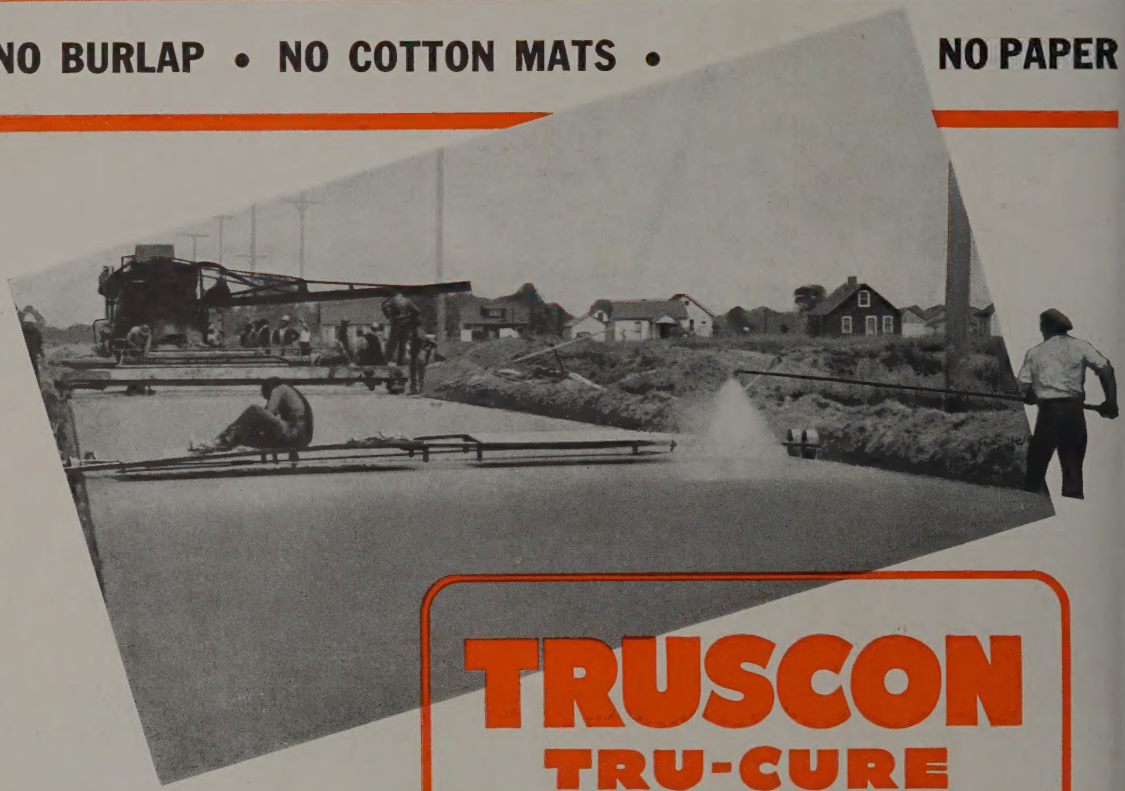
The Kawneer plant has enlisted 100% for an important role in the war effort. Kawneer experience and ability in the fabrication of rustless metal is now contributing developments that speed up certain war work tremendously. Your Kawneer distributor has Kawneer Store Front Construction in his stock. Check with him for materials available. Look for improved Kawneer products when the war is over.



Over 96% WATER RETENTION at 100° F

Spray It On and the Curing Job is Done

NO BURLAP • NO COTTON MATS • NO PAPER



Curing concrete roads leading to Ford Bomber Plant with TRUSCON TRU-CURE.

TRUSCON
TRU-CURE

The Time and Money-Saving Method of Curing Concrete

This advanced technical development meets the emergency war requirements by speeding up the job and providing:

—stronger concrete (higher compressive strength); harder concrete (greater wear resistance); sounder concrete (freedom from checks and cracks); more serviceable concrete (minimum maintenance necessary); more water-tight concrete (greater resistance to freezing and thawing).

TRUSCON TRU-CURE provides this *better concrete* because through its high water retention, the natural processes of hydration have had opportunity for completion. Over 96% water retention at 100° F. in first 24 hours.

TRUSCON TRU-CURE is applied immediately after finishing. Equivalent to a 14-day water cure.

Clear liquid—will not discolor concrete. No clean-up afterward. No need for bulky curing material or the time and labor costs of handling it.

Approved by United States engineers.

WRITE FOR LITERATURE to Dept. P-3 on this advanced method of curing concrete that saves time, labor material—and does a better curing job

TRUSCON LABORATORIES
DETROIT • • • MICHIGAN

St. Francis Hospital, Peoria, Illinois

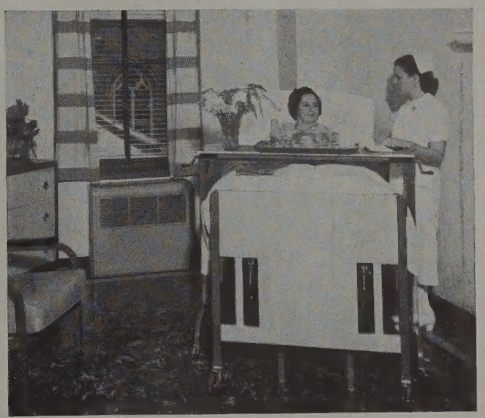
FIRST HOSPITAL

to install Revolutionary New Conduit Weathermaster System of Air Conditioning

Architect: Hamilton B. Dox • *Consulting Engineers:* Beling Eng. Co.
General Contractor: V. Jobst & Sons
Mechanical Contractor: Crowley Bros., Inc.

IDEAL LABORATORY CONDITIONS—Experiments can be carried on free from outside dirt and dust. Outdoor air, cleaned and correctly humidified, is supplied through conduits to this modern laboratory and other rooms in the new wing.

POST-MORTEMS are conducted with very latest type equipment in the post-mortem room in the new eight-story addition at St. Francis Hospital. Conditioned air is provided by the revolutionary new Carrier Conduit Weathermaster System. No chance for circulation of disease germs and objectionable odors from one room to another.



NO DRAFT—NO DUST—NO DIN. Windows are always closed and the temperature in private patients' rooms in the new wing is always the best for rapid recovery, thanks to the new air conditioning conduit system which permits individual control in each room.

Hospital history was made recently when the new eight-story addition to St. Francis Hospital in Peoria, Illinois was equipped with a new type of air conditioning system which promises to revolutionize the construction of hospital buildings.

All of the private patient rooms, clinical conference rooms, waiting rooms, solariums and offices in the new wing are served by this installation.

No Inter-room Recirculation of Air!

The outstanding feature of this new Conduit Weathermaster System developed by Carrier is the elimination of sheet metal ducts. The new system delivers all outside air after cleaning and correctly humidifying or dehumidifying the air in a central station conditioner. This air is delivered in conduits (instead of ducts) to Weathermaster units in the various rooms. ***Thus, all recirculation of air between rooms is avoided.*** Each Weathermaster unit takes the place of a radiator and has a Winter-Summer control valve enabling the occupant of each room to enjoy heating or cooling as desired. Proper humidity is maintained at all seasons from the central plant.

Besides offering space saving and low cost advantages, the Carrier Conduit Weathermaster System has other revolutionary features that contribute to the design of multi-room structures,—hospitals, hotels, apartment houses and office buildings. Let us send you detailed information.

The Navy "E", one of the U.S. Navy's most coveted honors, has been awarded to CARRIER *for excellence in war production.*

Carrier Air Conditioning

CARRIER CORPORATION
"Weather Makers to the World"
Syracuse, N. Y. Desk 137

Please send information on the Carrier Conduit Weathermaster System.

Name.....

Firm.....

Address.....

City.....

PHOTOMURAL VISTAS

now dramatized in glass

The Cottonwood Room, Blackstone Hotel, Omaha. Photomural by Kaufmann and Fabry. Design by Johns H. Hopkins.

Here's another new and interesting use of polished plate glass in modern interior design. Dramatized with lights of plate glass, this arresting vista in The Cottonwood Room of Omaha's Blackstone Hotel is what is believed to be the first full wall size, full color, illuminated transparency to be installed. It extends over the entire curved wall, seven and one-half feet by fifty-four feet, and is lighted from behind. In addition to its novel decorative effect it provides the illumination for the entire room.

The use of clear Libbey·Owens·Ford glass on both sides of the photomural contributes to the vista effect, provides clear vision, and protects the mural.

Here's a novel technique that offers a fine medium of dramatizing locale . . . scenes, historical points of interest, etc. . . . in reception rooms, foyers, dining rooms, lobbies, corridors and other places in public buildings, such as post offices, libraries, municipal and federal buildings, and in hotels and restaurants.

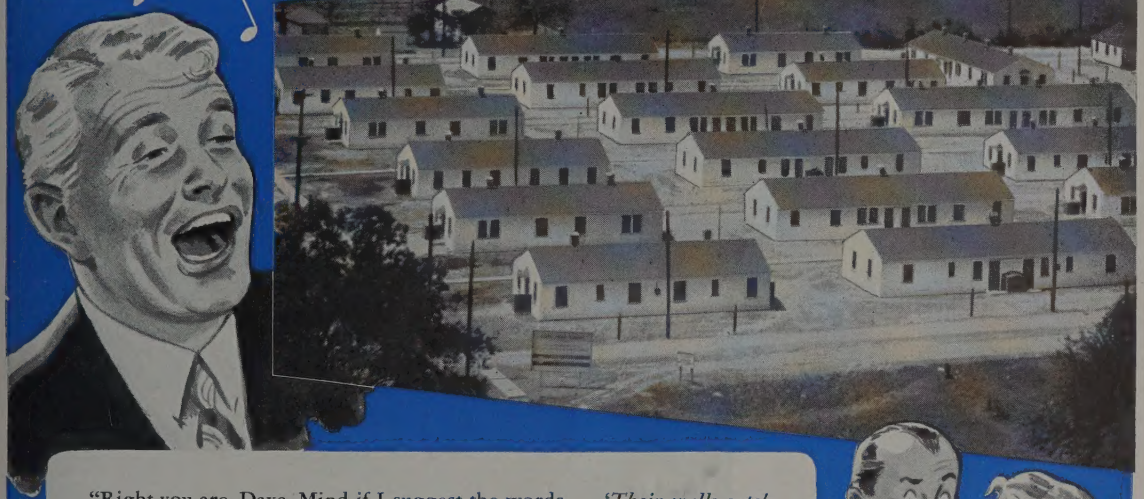
Here also is an ideal application for Libbey·Owens·Ford Polished Plate Glass. Its smooth, clear surfaces and greater freedom from imperfections and distortion fit it perfectly for installations where clear vision is an essential. Libbey:Owens:Ford Glass Company, 1323-A Nicholas Building, Toledo, Ohio.

L O F

LIBBEY·OWENS·FORD

QUALITY *Flat Glass* PRODUCTS

"They're really Houses to Sing about!"



"Right you are, Dave. Mind if I suggest the words . . . '*Their walls catch the gleam of the morning's first beam.*' Pardon the pun, but I can't help being enthusiastic about these particular defense homes."

"I wanted distinctive exteriors when I designed this job. That's why I specified stucco. Not only would it save both time and critical materials in its application, but it would provide a subtle beauty as well."

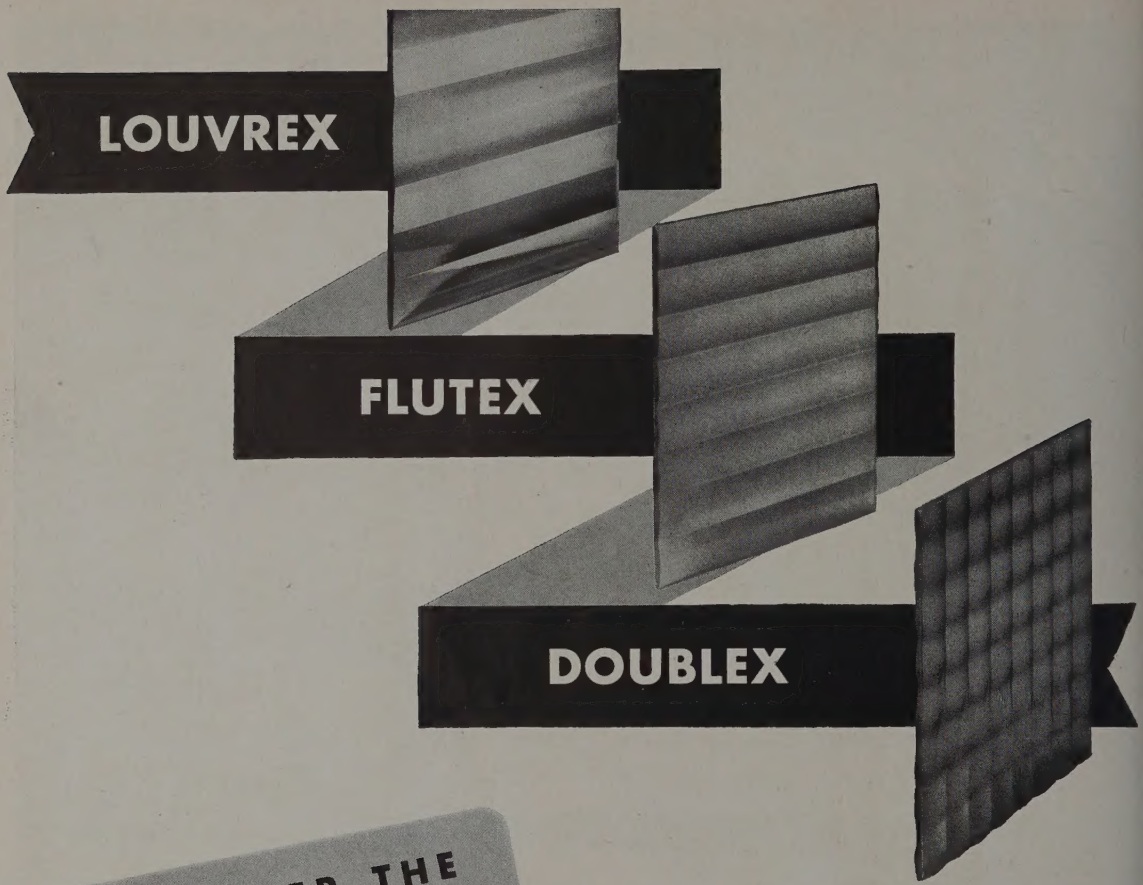
"You can see for yourself the results we secured. These houses are radiantly alive today and will be easy to keep fresh looking and attractive for years to come. Stucco has given them new permanent beauty."

TRINITY WHITE, the "whitest white" Portland cement, will produce the whitest white stucco and clearer, sharper colors in colored stucco.

Photograph at top is of Low Cost Housing Project, Fayetteville, N. C. Architect: Basil G. F. Laslett. General Contractors: McDevitt & Street Co. Waterproofing and Gunite Contractor: Western Waterproofing Co. Trinity White used as finish coat. Gunite application over cinder block.

"AS WHITE AS SNOW"

TRINITY WHITE
PORTLAND CEMENT
PLAIN OR WATERPROOFED



REMEMBER THE
3 EX's
IN *Decorative* GLASS

Wherever Soft, Diffused Light, Smart Decoration...and Complete Privacy are Desired

"Design interest" combines with soft, restful diffusion of light in Blue Ridge patterned glasses, manufactured by the Blue Ridge Glass Corporation, Kingsport, Tenn., and sold by Libbey·Owens·Ford through leading glass distributors. For interior and exterior glazing—for partitions, screens, illuminated panels and door panels—these 3 "EX's" sparkle with decorative interest.

Unsightly areas may be excluded from view in smart interiors, while an abundance of soft light is filtered through. Striking effects may be created by illuminating decorative panels from behind. Complete privacy, plus natural illumination, for offices, restaurants, bars and shops.

YOU CAN GET GLASS—Decorative glass is replacing many materials no longer available. It is not only beautiful, but practical . . . for glass never needs refinishing, is easily cleaned, does not quickly go out of style. For information, write Blue Ridge Sales Division, Dept. 1279, Libbey·Owens·Ford Glass Company, Toledo, Ohio.

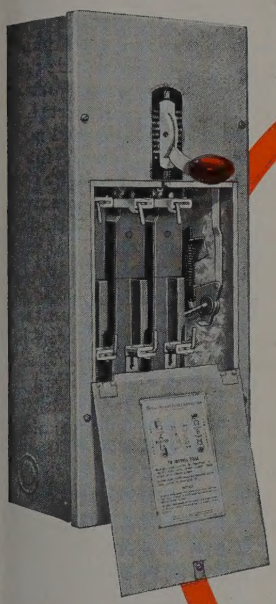
L O F

BLUE RIDGE *Decorative* GLASS

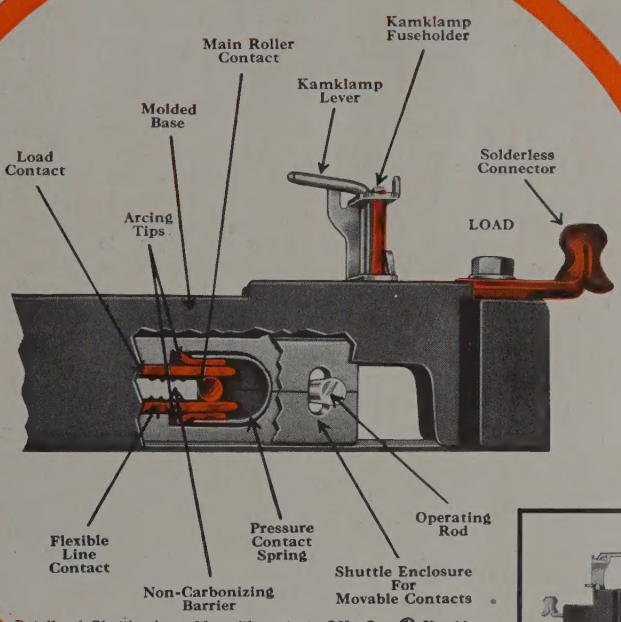
Sold Exclusively Through Libbey·Owens·Ford Distributors

BLUE RIDGE GLASS CORP. MANUFACTURERS OF QUALITY GLASS KINGSPORT, TENN.

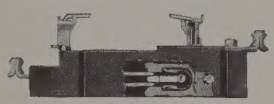
A Revolution in Safety Switch Design!



100 Amp., 575 Volt (FA) SHUTLBRAK Switch, Cat. No. SA-10633.



Details of Shuttle Assembly, with contacts ON. One (FA) Kamklamp fuseholder, and the new type (FA) Solderless Connector are shown. Note that the contacts are double break, and that they are held under compression by the pressure contact spring. This assures a perfect connection.



Contacts in OFF position.

Contacts in MAKE or BREAK position.

The contacts are shuttled ON and OFF—

that's why it's called the

(FA) SHUTLBRAK SWITCH

For motor circuits, service entrance, or any installation requiring an operating switch, this heavy duty industrial switch has new advantages.

The roller type main contact and auxiliary contacts are enclosed in an insulated shuttle. This shuttle assembly in turn is entirely surrounded by insulating material. There is an arc resisting barrier at all times between the line and load contacts — and contacts are held under compression in ON position. Silver plated current carrying parts insure low resistance. Properly engineered springs assure quick make and quick break. It is equipped with (FA) Kamklamp (pressure type) fuseholders for either ferrule or knife-blade types of fuse terminals, and with the new (FA) Solderless Type Pressure Connectors.

As an additional safety factor, Type A is equipped with an interlocking arrangement between the switch operating lever and the door of the fuse compartment. The door cannot be opened when the handle is in the ON position. (Type B does not have this interlocking feature.)

Enclosures have ample wiring space at top, and AT REAR of the switching mechanism. Attractively finished in pearl gray enamel.

Front operated, the (FA) Shutlbrak Switch may be used singly, banked in groups, or assembled in compact, well designed switchboards and panelboards.

Capacities: 30 to 1200 amp., inclusive, for 250 volts AC or DC, and 30 to 600 amp., 575 volts AC, in 2, 3 and 4 poles. Approved by Underwriters' Laboratories.

For detailed information, and suggested specifications for Shutlbrak Switches, Panelboards and Switchboards, write for Bulletin No. 59 . . . Frank Adam Electric Company, St. Louis, Mo.

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LETTERS from READERS

Occasionally the Editors are made unhappy by receiving anonymous letters or comments on the way we conduct THE NEW PENCIL POINTS: not unhappy because our feelings are hurt, but unhappy that such forthright, many times sparkling, pointed statements cannot be published. One of the fundamental policies of this magazine has been to sign all editorials, controversial articles, or other material that is not merely factual. We likewise welcome contributions only from those readers who frankly sign them.

JOHN M. KOKKINS, *Woodside, Long Island, Architect, declares that the full responsibility of the professional man must be assumed before Architects can regain their due authority in the industry: in other words, giving full service to obtain full benefits.*

In your July editorial you express impatience with the tendency recently displayed by many Government officials to place engineers where architects should rightfully be. In fact, in your entire June issue there is an undertone of uncertainty as to the future of the architectural profession.

Every time architects meet at conventions, one never fails to hear the usual pep talks about the wonderful opportunities for architects if only they would go out and sell themselves to the public. At the same time, they always propose new campaigns to make the public conscious of the architect.

All this is, no doubt, part of the same general feeling of dissatisfaction and concern, and one is led to suspect that the architects have not quite found their place in the building industry of today.

If conditions are left as they are, in my judgment, it is a matter of time before the independent practitioner of architecture is squeezed out of architecture by the engineer on one side and the general contractor on the other. The reason is that the architect has gradually farmed out to them and now they perform most of the basic functions in the field in fact as well as in the mind of the public. Moreover, they are not handicapped by Victorian ideas of social status or unrealistic and insincere professional ethics.

If the architect is to remain as the chief representative of an important profession now or in the future, he must accept all the responsibilities, hard and unpleasant work involved in order to reap the full benefits of which full service should entitle him.

*

ALBERT KAHN, *Detroit architect, discusses the need for a reformed building code, to be nationally applicable.*

Ever since being a member of the National Building Code Committee under Herbert Hoover, then Secretary of Commerce, I have advocated that codes should ask for a minimum and not for a maximum; that it is not fair to penalize competent designers simply to protect poor work by the incompetent. The Building Code Committee at that time was quite sympathetic to this plan; therefore in the work accomplished by the Committee a much more lenient code was created. Unfortunately, the work had to be dropped during the depression because of lack of funds.

I feel more strongly now than ever on this subject. In the present emergency, the Government is insisting

(Continued on page 10)

AYMAR EMBURY II
ARCHITECT
150 EAST 61ST STREET, NEW YORK

July 30, 1942

Mr. Kenneth Reid
Editor, PENCIL POINTS
330 West 42nd Street
New York City

My dear Mr. Reid:

On page 12 of the June issue of PENCIL POINTS appear some illustrations of the present design for Battery Park, and beside them is a paragraph printed in red stating that the F.A.F. has joined the "list of those who dissent," and announcing that the F.A.F. will soon conduct a competition for the design of Battery Park.

What purpose will such a competition serve, other than to waste the time and money of architects and landscape architects who make drawings and to harass a devoted public servant? In eight years Robert Moses has performed an incomparable service to the City of New York. There is no criticism of any of his accomplishments, but only admiration. The work conceived by him and designed and executed under his direction is the one thing which technical visitors, city planners, architects and landscapists from other cities and countries, wish first to see. With such a record in only eight years, it would be natural to suppose that any new projects proposed by him would without question be assumed to be of public benefit and of at least a satisfactory aesthetic standard. The public as a whole does so assume; but the societies and associations concerned with artistic affairs automatically oppose everything he proposes. If facts stand in the way, these are distorted or ignored; the societies leave no stone unturned in their efforts to obstruct improvements obviously in the public interest.

It has been very hard for us who have worked under Robert Moses to understand this attitude. Most of the work has been done with public funds intended to relieve distress, and the design has been done in large part by architects, landscape architects and engineers who were on relief, under the general direction of consultants paid by small per diem fees. It was obviously against the public interest to enrich individuals out of funds intended for relief. Work done out of other funds was let to engineers and designers in whom Mr. Moses had confidence.

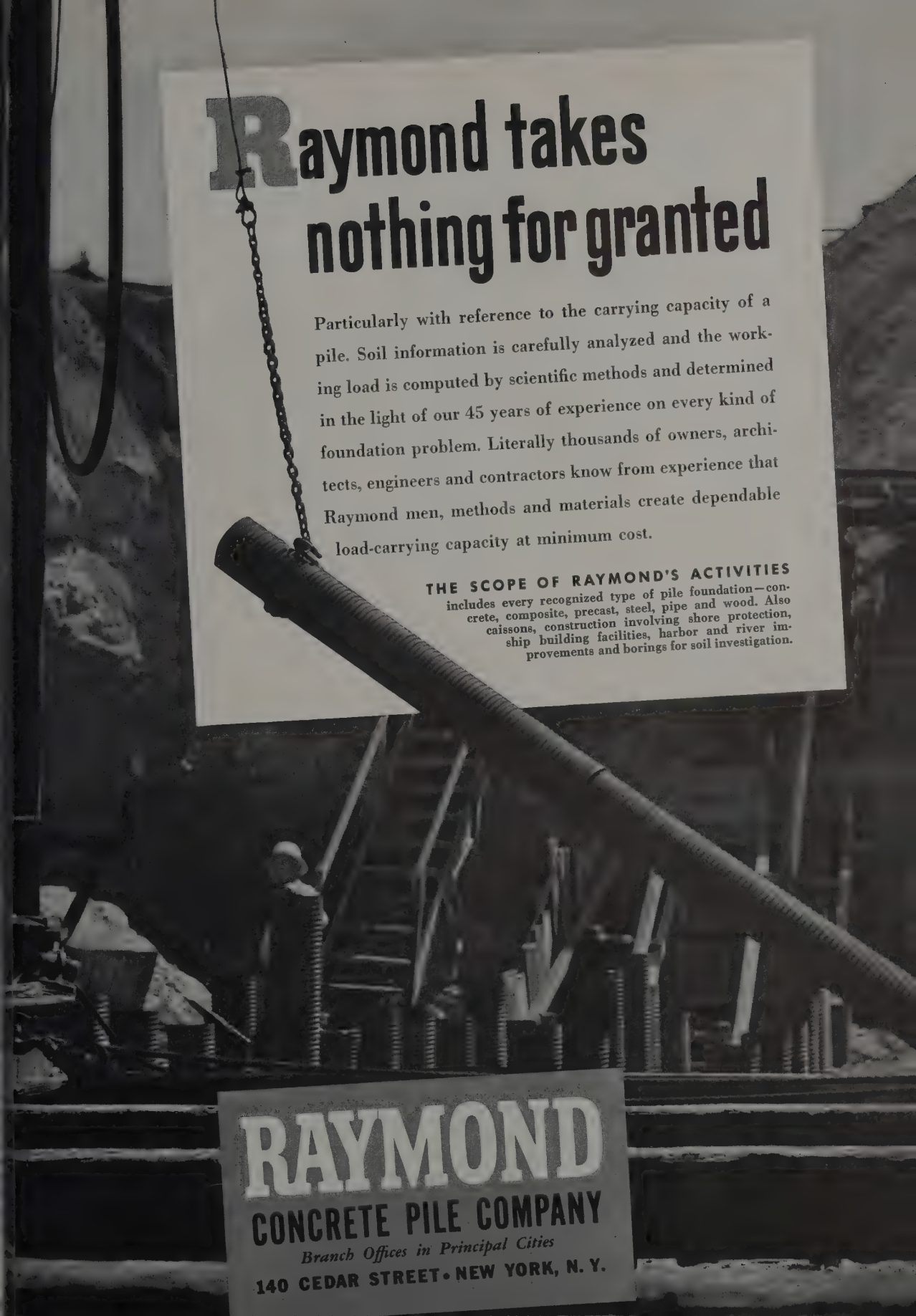
Can it be that all this opposition is instigated by men who were not employed, and is activated only by self-interest? Or is it due to a mean jealousy of a man whose accomplishments are infinitely beyond the capacities of his critics? And yet what other motives can exist? One can expect such motives to dominate what we call "politics," but for associations of artists and architects to so debase themselves is appalling.

Very truly yours,

RP

Aymar Embury II

The letter reproduced at the left raises a most reasonable question as to the propriety of the competition just concluded by the Fine Arts Federation of New York for the redesign of Battery Park. The battle for the preservation of the Aquarium or the restoration of Fort Clinton having been duly fought and lost by the sentimentalists (who have saved many other historic relics for posterity), it seems to us a fruitless effort to have conducted a competition whose program insisted upon the retention of the historic structure as a part of the solution. Only bitterness can result, and there appears to be too much of that already, in the profession



Raymond takes nothing for granted

Particularly with reference to the carrying capacity of a pile. Soil information is carefully analyzed and the working load is computed by scientific methods and determined in the light of our 45 years of experience on every kind of foundation problem. Literally thousands of owners, architects, engineers and contractors know from experience that Raymond men, methods and materials create dependable load-carrying capacity at minimum cost.

THE SCOPE OF RAYMOND'S ACTIVITIES includes every recognized type of pile foundation—concrete, composite, precast, steel, pipe and wood. Also caissons, construction involving shore protection, ship building facilities, harbor and river improvements and borings for soil investigation.

RAYMOND
CONCRETE PILE COMPANY
Branch Offices in Principal Cities
140 CEDAR STREET • NEW YORK, N. Y.

(Continued from page 8)

upon stresses far beyond those allowed by most codes, and I am sure they have no idea of having the buildings fall down. If these more liberal allowance can serve in war-time, why not make them serve in peace-time as well? We all know that with the newer methods of producing the right concrete mixes we are able to gain strengths never believed possible before. Still, no codes—as yet—make allowances for them.

What has struck me as particularly strange is the fact that in so many instances the architects, themselves, who happened to be called upon to write new codes, were insistent upon unreasonable demands. They certainly should know that the more economically we can build, the more building there is likely to be; therefore, it is to their direct interest to have codes as liberal as possible.

LOOKING AHEAD

I am heartily in sympathy with your new program for PENCIL POINTS, and although I think that you will probably lose some of the "old timers" from among your subscribers, you can rest assured that you will at least have taken a step which will keep you alive and make your work of value in the world that is in the making.

In my opinion, the architectural profession, as we have known it in the past, is dead, and I doubt if many of us who are excited over the possibilities of the future would be much interested in the type of practice we had ten to fifteen years ago. I am sure the sort of thing that I did for so many years no longer interests me in the least. Unfortunately, the profession as a whole has been ultraconservative, if not actually reactionary. How under the sun could we expect such a body to assume the leadership that it owes to society?

RALPH C. FLEWELLING, *Architect*
Los Angeles, Cal.

The policy of your NEW PENCIL POINTS is interesting. Every architect in the United States, or no doubt in the entire world, has felt the crushing influence of war on the practice of his profession and, as a consequence, is groping for suggestions from any source that will help solve the problems that he will inevitably face when the day of peace comes again.

I think that architects, as a whole, expect a new day in architectural design to be born of this great world conflict, and your foresight and in daring to lead the way in the advancement of new ideas and thought is highly commendable and, I am sure, will be warmly received.

W. G. CLARKSON, *President*
Texas Society of Architects

America is now thoroughly awake to the seriousness of what lies ahead. There is a definite realization that we can lose this war if we do not take advantage of every one of our national resources.

The sources of virgin raw materials, -- ore mines, coal mines, mines from which alloying materials are produced -- are being drawn upon to their limit. But now the steel industry, in order to produce the necessary steel for tanks, guns, planes, ships, shells, bombs, machines and other vital war material, needs 6,000,000 tons of scrap in addition to the regularly available supply to achieve its goal.

The extra supply of iron and steel scrap is largely beyond the control of our industry -- it is in the hands of more than a hundred million Americans. In order that ultimate Victory may be assured, every individual must adopt an objective, fact-facing attitude and pledge himself to help in the mobilization of every pound of iron and steel scrap and make it available, through regular channels, in order that it can be converted into prime steel.

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CAMOUFLAGE COURSE

The second professional course in Industrial Camouflage, under the auspices of the Office of Civilian Defense, will be given by Pratt Institute, of Brooklyn, N. Y., beginning September 8. The course, open to architects, engineers, landscape architects, industrial designers, and other qualified professional persons, consists of concentrated instruction in protective concealment problems. The program will emphasize protection of community facilities and manufacturing plants in vital war industrial areas.

Qualified lecturers will discuss such topics as Application of Camouflage to Industrial Buildings, Camouflage Techniques, Analysis of Industrial Areas, Interpretation of Aerial Photographs. The course is scheduled for a five-week period, three evenings a week. The $30 tuition fee includes a textbook and reference material. Application for enrollment may be made to *James C. Boudreau*, Pratt Institute, 215 Ryerson St., Brooklyn, N. Y.

The splendid work of the Camouflage Staff at Pratt Institute—conducting classes, research, and laboratory experiments—has been noted before on these pages.

LOW-COST WAR HOUSE

Suggested by Purdue University, Lafayette, Ind., as a possible solution to the housing problem during the emergency is a novel, fire-resistant, shockproof structure, designed by *Carl F. Boester*, Director of Housing Research of the Purdue Research Foundation. The "war house," to be constructed at a total cost between $1200 and $1500, was opened to the public recently in an effort to determine the reaction of workers to the possibility of the house as an emergency home.

The Boester version measures 24 by 28 feet over all and has a 16 x 18 foot living room, bedroom for parents, bunk rooms for children of opposite sexes, a combined kitchen and laundry room, dining alcove, and a shower bath with toilet and lavatory adjoining. There are three closets and ample storage space in the attic.

Using a Franklin type stove, the completely-insulated home, according to estimates, could be heated uniformly with 3¾ cords of wood, 2½ tons of coal, 340 gallons of oil, or 55,000 cubic feet of gas a season.

INDUSTRIAL DESIGN

A recently issued 12-page report summarizes the experiences of the first year of activities of the Industrial Design Section at the California Institute of Technology, Pasadena, Calif. The Institute offers a professional degree in industrial design upon completion of a two-year course which is open to college graduates who have majored in engineering, architecture, or an acceptable equivalent. Women are also eligible for the course if they meet the requirements. Chairman of the faculty of the Industrial Design Section is *Antonin Heythum*.

PERSONALS

George Grant Elmslie, *Architect*, has moved his headquarters from 122 S. Michigan Ave. to 5723 Blackstone Ave., Chicago, Ill.

Harry Lucht, *Architect*, has moved his office from Cliffside Park, N. J., to 1700 Teaneck Road, West Englewood, N. J.

Thomas M. Donohue, *Architect*, of Wilmington, Delaware, has closed his office for the duration. His present address is P. O. Box 11, Marshallton, Delaware.

It's the refinements...the benefits of patient research...*the quality*...of the electrical wires and cables upon which uninterrupted operation depends.

In electrical wires and cables, the "tremendous trifles", the never-heard-of-improvements, small as many of them are, are lengthening the period between "begin operation" and "breakdown". They are safeguarding *steady* production . . . they have been built to keep pace with 3-shift operation.

Anaconda research has developed scores of product improvements and many completely new products that are today meeting these critical demands. Their improved constructions deliver greater capacities with less power loss, their insulations can withstand high heat, corrosion, abrasion. The research that built these wires and cables continues at a fast pace. Now in addition to delving into experiments for improvements in industrial products, Anaconda is devoting much of its research to wiring for residential and commercial building.

When peace returns, adequate commercial and residential wiring will need your attention.

The electrical future will place greater demands than ever before on those in a position to make wiring selections. Anaconda will cooperate with architects with information and with products measuring up to their specifications. 42224

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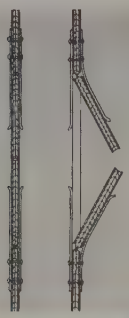
PRODUCTS PROGRESS

The columns of this section are open to any manufacturer who has a new product of interest to the architectural profession. Manufacturers wishing to have their product shown here should send a glossy photograph, together with information covering the function, characteristics, installation, cost of the product, and a description of what A.I.A. literature is available.

EXCITING "SALES TOOL" FOR ARCHITECTS.
California Arts & Architecture, Los Angeles

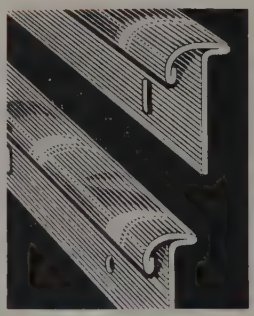
Here is something that takes th architect's portfolio of executed work out of the family albu class! Don't put your clients t sleep showing them flat photo graphs when they can see yo interiors and exteriors in dimensions and in full color b means of stereo photograph Camera and viewer produ thrilling photographic results real and natural as a trip to th actual building.

CONCUSSION VENT PANEL FOR BLACKOUT.
Fuller Box Co., 500 Dargan St., Pittsburgh



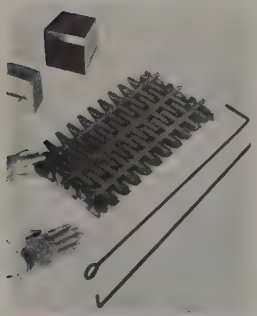
A panel to be used to replace glass window panes. Bomb explosion concussions cause hinged sections to open, relieving pressure, and then close, assuring sustained blackout. Weatherproofness is restored by taping break in the cover paper. It is claimed to be the only substitute for glass capable of relieving pressure before wall damage is done. Panels available in all reasonable sizes.

METAL TRIM FOR PROMPT DELIVERY.
The B & T Floor Company, Columbus



Available in 12-foot lengths, a extensive line of rolled met strips called Chromedge includ a very practical non-drip sil edging, as well as numero styles of linoleum insert trim and other shapes for carpet trim corners, bindings, nosings an wall panel trims. Extensive e isting stocks permit prompt d livery of sections. Catalog ava able from manufacturer descri ing complete line of moldings.

COAL GRATES FOR GUN TYPE OIL BURNERS.
Anchor Post Fence Company, Baltimore



The appliance consists of a grate mounted on bearing blocks above the combustion chamber. The oil burner remains in place and its fan provides air for burning pea size anthracite coal in the added coal grate. It is possible to change from oil to coal or back to oil in a few minutes so that whatever fuel is available may be utilized. The appliance has been named "Convert-O-Grate."

PANELBOARD FOR DUST LADEN LOCATIONS.
Frank Adam Electric Co., St. Louis

This panelboard is designed f use in shell-loading plants, co mines, flour mills and simil locations. Dust-tight handles o erating through bushings enga handles on the circuit breake inside the cabinet. A solid st dust-tight front plate is gasket and secured to an extra wi flange with screws. Box corn are welded. Conduit outlets dust-tight, welded hubs. Th are no screw openings thru b

KITCHEN CABINETS FOR HOUSING PROJECTS.
Mutschler Brothers Co., Nappanee, Ind.

Not available for individual projects, a line of hardwood, completely finished wall and floor units and sinks, is offered for multiple unit projects involving 15 or more kitchens. Cabinets are distinguished by low cost, the elimination of critical materials, quick installation, prompt delivery, and adaptability. The manufacturer will consider special sizes or types for quantity production upon request.

DAMAGE CONTROL LIGHT.
F. W. Wakefield Brass Co., Vermilion, O.

Designed as a high intens source of emergency light ships, this unit has found a pl wherever high emergency illu nation is necessary. High li output is obtained by apply an over-voltage to a sealed be lamp normally rated at 6 vo Three types supplied by wet dry cell batteries are availab weighing 8, 10, and 24 pou and ranging in price from $8. to $32.50 list.

TRAP THE NOISE DEMONS

. . . with ceilings of Armstrong's Cushiontone

IT'S BAD BUSINESS to let your clients' office employees have to fight noise demons. Work slows down and mistakes pile up as long as these costly nerve janglers are on the loose. But it's easy to trap them with ceilings of Armstrong's Cushiontone—the new material that puts efficient noise-quieting within the reach of modest budgets.

The 484 sound-absorbing holes in each square foot of Armstrong's Cushiontone give it a noise-reduction coefficient as high as .75 in the A3 thickness. Your clients won't need fine instruments to appreciate the difference this makes when Cushiontone is installed. The effect is positive and pronounced.

Armstrong's Cushiontone is factory-painted, ready to apply to any ceiling which is firm, dry, and reasonably level—in new or old construction. Installation is quick and easy, without undue interruption to business. Maintenance is at a minimum, for Cushiontone is easily cleaned, and can be repainted whenever necessary without affecting its acoustical efficiency in the slightest. Its ivory-colored surface has the excellent light-reflection factor of .73, which helps improve general illumination.

Write for the Facts—Our new booklet gives the whole story of Armstrong's Cushiontone. We should like to send you a copy. Just drop a note to Armstrong Cork Company, Building Materials Division, 1227 State St., Lancaster, Pa.

Armstrong's Cushiontone

Made by the Armstrong's Linoleum (A) *Makers of and Asphalt Tile*

REVOLVING UNIT HEATER.
L. J. Wing, 160 W. 14th St., New York

This latest addition to the Wing line of revolving unit heaters has a variable discharge heater. Provisions for adjusting the amount of heated air discharged from any side of the heater is incorporated in the discharge outlet, making possible the heating of a long, narrow room or building with one heater. The discharge from the multiple outlets is effective in buildings or rooms with low ceilings.

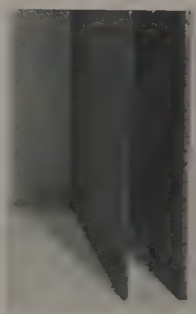
ASBESTOS DUCTWORK SHIPPED FLAT.
Chrysler Corp., Dayton

The various sizes of Formdux sections and adapters make it possible to meet requirements of all types of ductwork installations. The illustration shows the duct being formed into a rectangular section. Cement applied along each of the beveled edges makes an air-tight seal. The product is a fireproof ductwork and is said to save four out of five pounds of metal depending on the installation.

CEILING MOUNTED HOSE REEL.
Zierden Mfg. Co., 3637 S. Ellen St., St. Francis, Wisc.

The Rollaway hose reel is permanently installed and directly connected to the water supply, insuring protected hose storage at all times. Model No. 100, with a 100-foot hose capacity, is priced at $14.95; Model No. 200, with a 200-foot hose capacity, is priced at $17.95; both f.o.b. factory. The hose rests in large loose loops, eliminating hose strain. Available reels limited by existing emergency.

UNDERFLOOR BOARD PROVIDES RESILIENCE.
Keystone Co., 43 E. Ohio St., Chicago



Keystonite board is a thin asphalt mastic board designed for use as an underlay with linoleum and composition flooring. The product, resilient and impervious to moisture, is available in thicknesses ranging from 6/100 to 3/16", widths up to 48", and in any length. Keystonite is composed of a high melting point asphalt in combination with mineral aggregate, sealed between dry, non-bleeding liners.

The New PENCIL POINTS News

Published as a Supplement to The New Pencil Points

SEPTEMBER 1942

THEY SAY—

"History is merely gossip."
—Oscar Wilde

—That war housing standards of quality have been so high, considering materials shortages, that WPB is requiring NHA to restudy specifications. At least one architect-prefabricator has said the same thing since pre-Pearl Harbor days.

—That billeting war workers in private homes is off again, at least for the present, because the government doubts its authority for such proceedings.

—That resin-bonded plywood bathtubs have to wait on resin-bonded plywood planes. Will waterproof plywood for prefab. houses be next?

—That rural WPB branches have been instructed not to act on applications for construction unless local sources of building materials have more lumber, etc. than is needed for common emergency building due to floods, fires, grain storage and the like.

—That insurance companies have unloaded most of the farms they had to take over during the depression (remember?). One company has sold 60% of its farm properties—four-fifths of them to farmers. Companies don't think much of city buyers, not when real farmers are flush, anyhow.

—That Detroit's housing industry (private builders) is going ahead with 4,000 homes now under construction, and will probably get 12,000 more units to complete by the end of the year—this as one result of the slight disagreement over public housing at Willow Run.

—That part of the lumber trouble could be averted if Northwestern operators would raise wages. Seems they lose labor steadily to shipyards. But what with price ceilings —get it?

(Continued on page 4)

Special Construction Ceiling

Regulations Due Soon

Now Covered by General Maximum Price Regulations

Washington, D. C.—Though not included in the recent revision of the OPA's Consumer Service Regulation (No. 165) under which many more types of services were put under ceilings, building construction as well as repair and maintenance are due to have special regulations in the near future. Administrator Leon Henderson has disclosed that work is proceeding on maximum price regulations covering these types of work.

Meanwhile, construction costs climbed, during the first eight months of 1942, to the highest levels attained since 1913. Overall increase since Jan. 1, 1942 was 5%, reflecting a 9% rise in lumber prices and lesser rises for various types of labor. Also contributing to increased costs are lower labor efficiency due to shortages of skilled artisans, higher freight costs and delivery delays.

Type of Formula

Various reports have circulated about the ceiling order, the most reasonable of which anticipate ceilings based on cost-plus procedure, that is, on cost of materials plus cost of labor as of some specified date plus a percentage. Reportedly the formula contains provisions for validating existing contracts.

Fees Out, Bids In, at Present

According to the N. Y. Building Congress, architectural and engineering fees are excluded under present regulations. Office of Price Administration officials concede that the application of price ceilings to the construction industry has created a very involved and serious problem. Most contractors have labored under the assumption that the price ceilings, for example, do not apply to bids; nevertheless, OPA officials maintain that bids are definitely covered by the price regulations.

AHEAD—National C. of C. Predicts

Eric A. Johnstone, President, U. S. Chamber of Commerce: After the war we will have the greatest plant capacity in history. We will have a greater source of raw materials, both natural and synthetic, than we ever had. We will have the greatest number of skilled mechanics and technicians ever available to any nation. We will have the greatest backlog of accumulated demands for all sorts of commodities. The people will have accumulated savings with which to buy this backlog.

Business will thus be able to provide employment for millions who are now war workers. It must, because otherwise government will do it, and then, like the people of Germany, the people of the United States would give up some of their fundamental liberties to the State. And progress as we have come to define progress would become static.

FPHA ISSUES STANDARDS

Housing Materials, Planning

Washington: With the lumber situation continuing to be critical, the Federal Public Housing Authority has listed for consideration for use in war housing numerous kinds of lumber which are exempt from WPB's lumber freeze order. Types include:

All kinds of hardwoods; products of mills producing less than 5000 bd. ft. daily; retail stocks; short lengths; beveled siding; oak flooring; and carefully selected culls from low grade lumber.

A-1-A Priority

Since this was written, WPB has assigned lumber for essential war housing projects an A-1-A priority, in Conservation Order M208, effective Aug. 27.

New Planning Standards

Either already issued to regional offices of the FPHA, or about to be issued, are standards for two types of war housing. The Authority calls special attention to its policy of building predominantly temporary housing for the duration, "because of the demands of the war emergency." Also, materials must be conserved; metals remain most critical, lumber is next, those which put

(Continued on page 4)

NEW HOUSING STANDARDS ISSUED

(continued from page 1)

the greatest strain on transportation follow.

The two sets of standards available are *"Standards for War Housing—Excluding Temporary Projects—May,* 1942," and *"Standards for Temporary War Housing — July,* 1942." Temporary Standards will be issued to regional offices shortly.

Utilities, Kitchen Equipment

Design of water, gas, and electric services for war housing is governed by WPB's "Standards of Design for Utilities," under which water mains, water services (average), gas main, and gas services (average) are each limited in length to 60 feet for housing started before April 22, or 50 feet for housing started later.

NHA is now taking bids on kitchen and cafeteria equipment for war dormitories. Detailed specifications are available on request.

WPB NOW CONDUCTING MACHINERY INVENTORY

Nationwide Survey of Construction Equipment

Washington—WPB has started a nationwide inventory of used construction machinery. The tabulation is being made by WPB field offices in an effort to place 500,000 pieces of vitally needed equipment in use where it will have the maximum value. The inventory will be kept up to date in local offices for the information of war agencies and private contractors engaged in war work.

As of August 17th, WPB announced that road construction and maintenance equipment owned by states, counties and municipalities is sufficient for all municipal and sub-governmental requirements for at least two years. Careful maintenance is necessary, however. State or local officials who wish to use equipment not now in their possession should contact WPB's Bureau of Governmental Requirements.

THEY SAY—

(continued from page 1)

—That a third of the "demountable" houses erected at Indian Head, Md. for the old FWA program, are to be moved to a Washington suburb to relieve the capitol's housing shortage, thus providing an unexpected test of their transplantability.

—That drafting may be done in the future on steel boards, with drawings held down by small magnets of alnico, a new, tremendously powerful, permanently magnetic material.

—That the next kind of heavy construction to expect will consist of rolling mills, foundries, etc., to increase production of scarce items for which we have raw materials.

Technical Men's Program

Manpower Committee Reports

Chairman McNutt of the War Manpower Commission has appointed Edward C. Elliott, President of Purdue University, to head a committee to study the problems of insuring an adequate supply of trained technical personnel for the Army, Navy, and industry.

The committee has just reported on methods of financing college attendance for talented students who lack funds, of ensuring a minimum depletion of the ranks of technical men by the draft or enlistment, and of routing students to appropriate services or industries.

SAND IN THE ICEBOX?

Boston, Mass.—The American Institute of Chemical Engineers heard that silica aerogel (puffed-up sand, no less) is about twice as good an insulator as present materials.

When peace comes, maybe our newly-manufactured, sand-insulated refrigerators will have walls only 1½ inches thick, with 9 cu. ft. capacities contained in the same outside dimensions as our present 6 cu. ft. box. And for house insulation, silica aerogel might also have great possibilities.

DRAPER NEW FHA DEPUTY

To Supervise All FHA Housing

Earle S. Draper, former Asst. Commissioner of the FHA, has been appointed FHA Deputy Commissioner. His new assignment of duties includes supervision and direction of all FHA war housing operations and postwar housing activities. He is also to be liaison-man with all other governmental agencies dealing with war or postwar housing.

PRIVATE HOUSING, FHA-INSURED, UP 4% IN FIRST HALF

Heavy Gains in War Industry States; Labor Statistics on Total Residential Building

Washington, August 22—FHA Commissioner Ferguson announced that new home mortgages accepted for insurance by FHA during 1942's first half have shown wide fluctuations as compared with the first six months of 1941. Total for the United States, including territories, is a 3.9 percent increase.

While the figures cannot be considered a barometer for future private dwelling construction, they do reflect the impact of the total war program. States containing war industries of importance show gains as high as 222 percent; others show drops as great as 98 percent. Gross dollar value for the country as a whole rose to $ 49,555,650 from $432,735,250.

FHA Percentages by States

Twenty-one states and the District of Columbia showed increases, as follows:

Nevada 222.6, Arkansas 170.9, Virginia 128.7, Kansas 83.5, Oklahoma 61.1, Maryland 54.7, Maine 54.3, New Hampshire 53.2, South Carolina 49.7, Massachusetts 49.0, Connecticut 40.9, Alabama 40.3, Utah 40.3, Washington 29.8, Texas 29.6, Louisiana 23.7, New Jersey 17.5, Arizona 17.4, Ohio 16.9, Georgia 13.6, Pennsylvania 7.7, and District of Columbia 4.1.

States which showed the greatest losses were: Idaho 77.4, Delaware 82.6, Montana 73.5, North Dakota 98.6, Vermont 67.8, Wyoming 69.7, and the territories of Alaska 95.7, Hawaii 81.7, Puerto Rico 51.1. Noteworthy is the fact that California, with its numerous war industries, showed a decrease of 11.5 percent.

Total Residential Figures Lower

According to the Department of Labor the total of non-farm private construction for dwelling purposes was 302,000 new dwelling units for 1942's first half. This figure includes construction with both FHA-insured and non-insured mortgages, and represents an 18 per cent decrease over the comparable 1941 period. Secretary Perkins announced the drop as being due to a 38 percent decrease in private construction since April 9th, 1942, date of the WPB "Stop - Building" Order L-41.

From the same source come figures showing that, according to permit valuations, construction of all kinds for the entire country was, in number of buildings, off 21.2% in June, 1942 as compared with May, 1942; and off 40.2% compared with June, 1941. Total valuation was reduced 27.6% and 56.5% for corresponding dates.

WOOD USAGE CHANGED BY WAR, SAYS L. R. KEITH

Lawrence P. Keith, of the National Lumber Manufacturers' Association, stated recently that the availability of lumber to meet the steel shortage has been greatly enhanced by recent developments.

As a result of extensive stress studies, it has been shown that stresses much higher than dead load stresses can be safely used in timber structures when the maximum stress is of short duration. Examples include such design factors as wind load, impact (as in trestles designed for high-speed trains), etc. The procedure is called the duration-of-stress theory.

Other ways in which lumber meets the emergency include prefabrication of wood structures, use of glued, laminated construction, composite and timber-connector construction, said Mr. Keith.

Using Unseasoned Lumber

Much lumber commercially available, continued Mr. Keith, is by force of circumstances improperly seasoned. Since better grades and types are now in demand for airplane construction and military work, stresses in any event should be established on the basis of using only those rated for lower stresses.

The 1200 lb. grade is approximately the maximum obtainable today. Shrinkage due to drying out can be minimized by recognizing, while designing a structure, that little shrinkage takes place endwise.

DON'T LET THIS FLOOR FOOL YOU!

Lilac Lanes, Minneapolis, Minnesota, where 7000 square feet of Armstrong's Asphalt Tile were used to create the beautiful floors in this popular cafe. Designed by Clyde W. Smith and Henry J. Scherer, Architects. Installed by Venice Art Marble Co. General Contractors, Devereux-Olson Construction Co.

It looks expensive . . . but it's really economical . . . and made to last a long time!

YOU CAN SEE from the picture above that a floor of Armstrong's Asphalt Tile has beauty . . . the kind of smart beauty clients demand these days. What the photograph doesn't show, however, is the *economy* of these floors.

With an Armstrong's Asphalt Tile Floor your client will learn what real floor economy means. He'll find that the initial cost is moderate. He'll quickly learn that it is easy and inexpensive to maintain. As the years go by, he'll discover that Armstrong's Asphalt Tile continues to save him money . . . it keeps its fresh, colorful beauty and comfortable resiliency despite scuffing feet and scraping furniture.

Yes, floors of Armstrong's Asphalt Tile can really take it! Specify them for the heaviest traffic areas—restaurants, stores, school and hospital corridors, and busy offices, with the assurance that they will give your client complete, lasting satisfaction. You can even install them on concrete subfloors in direct contact with the ground—because they aren't affected by moisture or alkali.

Designs? Armstrong's Asphalt Tile comes in a wide selection of plain and marble colorings, in a variety of sizes and shapes. And because it is hand set, a tile at a time, it's easy to create distinctive, personalized interior effects.

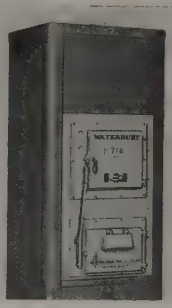
Consult "Sweet's" for all the facts about Armstrong's Asphalt Tile. Or write today for free illustrated booklet: "Low-Cost Floors with a Luxury Look." Armstrong Cork Co., Building Materials Division, 1206 State St., Lancaster, Pa.

ARMSTRONG'S ASPHALT TILE

The low-cost floor with the luxury look

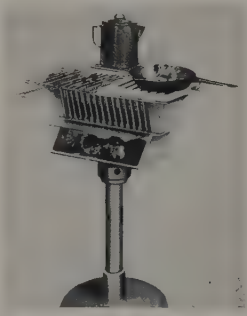
MADE BY THE MAKERS OF ARMSTRONG'S LINOLEUM

FORCED WARM AIR HEATING UNIT.
Waterman-Waterbury Co., Minneapolis



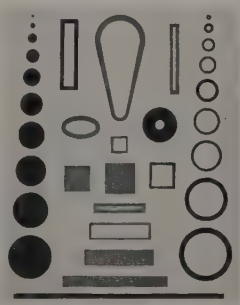
Designed for coal, this HB718-10 heating unit is suitable for the small home where space economy is a prime consideration. It occupies a floor space only 26" square, and is recommended for use in housing units for war workers because of its compactness. The casing has round corners and is finished in green wrinkle enamel. (Btu output not given.) Units of this compact type should have many post bellum uses.

OUTDOOR STOVE.
Majestic Company, Huntington, Indiana



This outdoor stove is suggested for people who are spending more of their recreational time in their backyards. Mounted on a swivel base, it can be turned in any direction so as to get the best draft. For fuel, any type of commercial charcoal is satisfactory. Cooking surface is 10¾ x 25½"; grate and broil surface is 21½ x 25½". The ash pit with the door forms an ideal baking oven. Unit weighs 112 lbs.

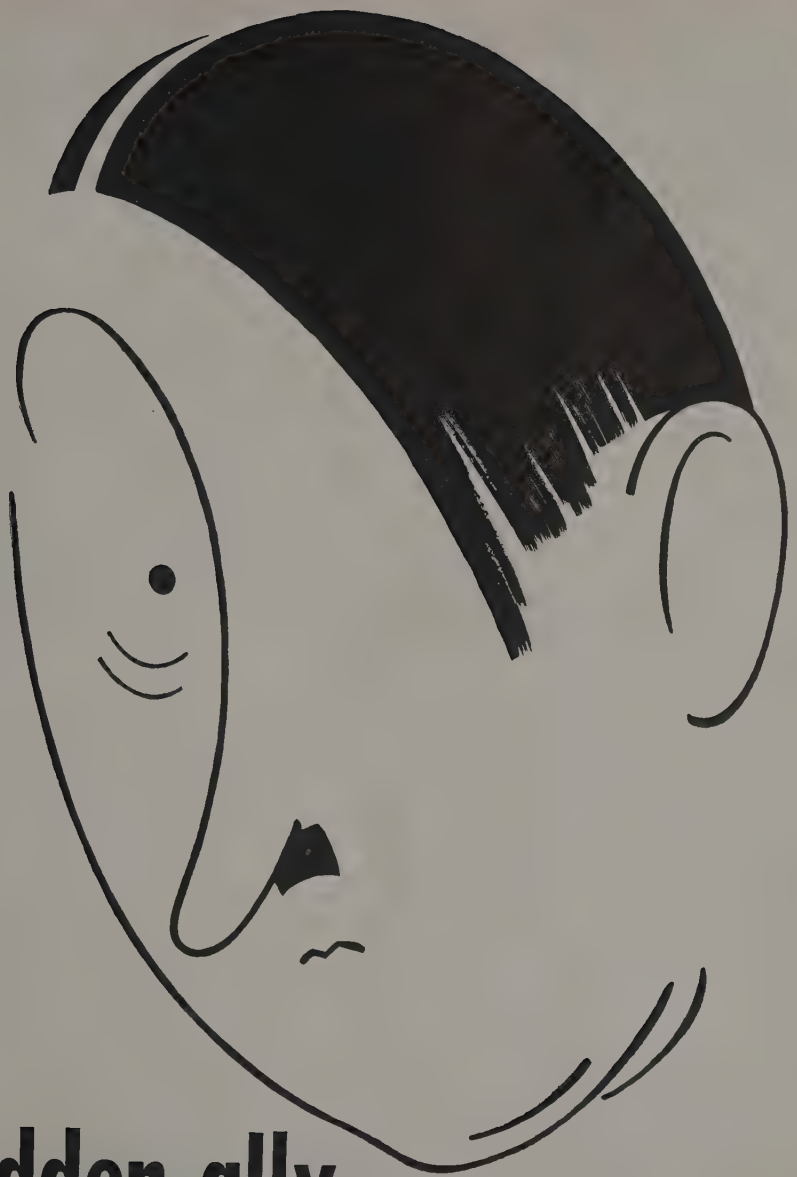
EXTRUDED PLASTIC SHAPES.
R. D. Werner Co., 380 2nd Ave., New York



Plastics are, of necessity, taking the place of many critical materials in war production. The illustration shows some of the shapes in plastic rods, tubes, angles, tape, and wire being made by Werner. Shapes can be extruded in continuous lengths and they come polished or dull, direct from production. The plastic rods and tubes can be extruded in colors as well as in clear plastic, allowing wide design latitude.

SAFLEX FEEDER DUCT.
Square D Co., 6060 Rivard St., Detroit

This low reactance feeder duct is designed to serve as the feeder between transformer banks and main switchboards or as a feeder to branch circuits where minimum voltage loss is essential. The duct is principally enclosed in non-metallic insulation. It is available in capacities from 500-6,000 amps., 600 volts or less for single phase, 2 and 3 phase, and 3 phase, 4 wire services. Balanced phases are had at all points.



Guard against Hitler's hidden ally

Power failures are hidden allies of the Axis... special friends to Hitler & Co. War production demands the protection of Exide Emergency Batteries.

Despite all precautions of utility companies, forces beyond their control *can* cause power failures. Storms, floods, fires, and street accidents may shut off power and light with disastrous results. But Exide Emergency Batteries operate instantly and automatically when normal electric current ceases.

No architect should be without full knowledge of this protection. Write or wire your nearest Exide Branch, an experienced Exide Field Engineer will help you with plans and specifications for stand-by power and emergency lighting.

Exide
EMERGENCY BATTERIES

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia
The World's Largest Manufacturers of Storage Batteries for Every Purpose
Exide Batteries of Canada, Limited, Toronto

Things happen on an assembly line when you get LIGHT FROM YOUR FLOOR

IF YOUR FLOORS ARE WHITE, YOUR PLANT GETS MORE LIGHT

WAR PLANTS GET RID OF SHADOWS IN WORK AREAS

. . . with a floor that reflects light!

White Cement floors increase the intensity of illumination throughout plants and conserve critical materials. In addition, they provide more light on the underside of assemblies.

● *White cement floors speed war production by lighting up dark areas under wings on assembly line of one of Uncle Sam's larger aircraft plants.*

ENGINEERS have found a new way to increase light intensity. And the answer lies right under your feet as you walk along the assembly line.

FLOORS ARE THE NEW SOURCE OF LIGHT—white cement floors that absorb less and reflect more light—floors that retain a high reflection value indefinitely. In one factory, they reflect 60% more light than the gray cement floor in the same plant, and increase lighting intensity on a vertical plane more than 20%.

● *The white cement floor (left) reflects 60% more light than the gray cement floor (right) in this plant. This increased lighting intensity on a vertical plane more than 20%.*

IN AIRPLANE PLANTS—AT BOEING, CONSOLIDATED, DOUGLAS, AND NORTH AMERICAN—these white cement floors help to keep production in high gear. Employees work easily on the undersides of wings and fuselages with less strain and fatigue. Accidents are fewer. Morale is higher. Planes roll out faster to help win the war.

LIGHT-REFLECTING FLOORS ARE EASY AND ECONOMICAL TO MAINTAIN. They will improve lighting standards in most types of buildings. Send today for booklet giving detailed information on increase in illumination, installation and maintenance. Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York City.

• • •

OFFICES: New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Birmingham, Waco.

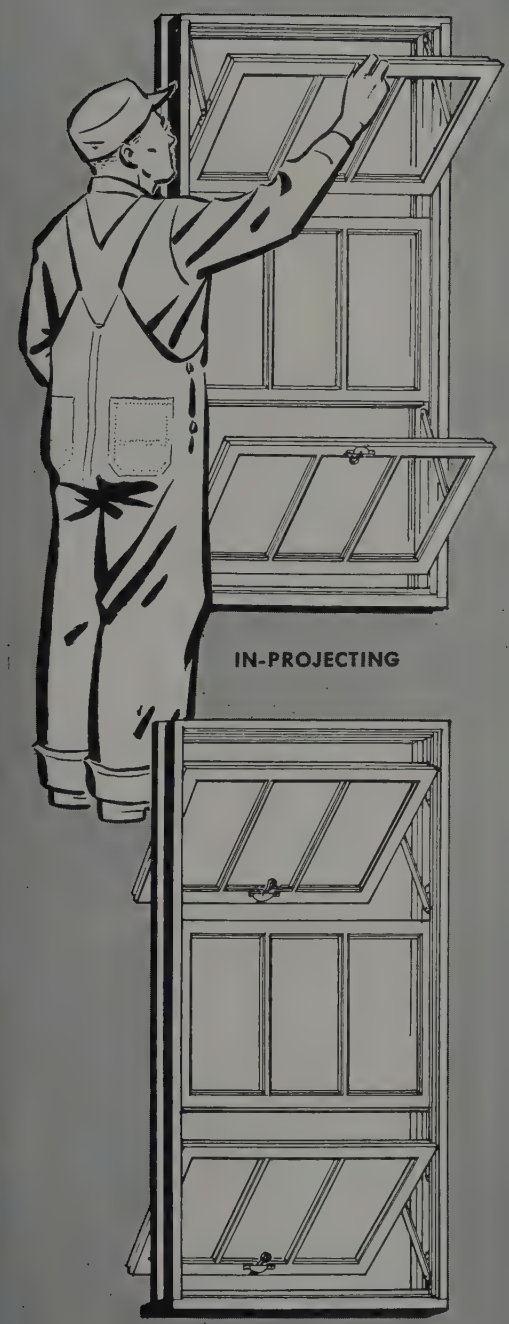
PP-F

LIGHT-REFLECTING FLOORS

MADE WITH ATLAS WHITE CEMENT

for industrial sash, TOO

IT'S CURTIS



Traditional Curtis quality—traditional Curtis workmanship and care—these are some of the "extras" you get when you order your National projected wood sash units from Curtis. Curtis is prepared to manufacture these units in accordance with the designs and specifications of the National Door Manufacturers Association, Inc. . . . and to deliver them with Curtis promptness.

National projected wood sash consist of 18 standardized basic units, designed by Graham, Anderson, Probst and White. Each basic unit is a complete opening in itself and may be installed individually, or the various units may be combined both in height and width to meet almost every installation requirement.

The standardized frame is designed to accommodate either bottom pivoted, in-projecting vents, or top pivoted, out-projecting vents.

You will find National industrial sash units—as manufactured by Curtis—a material aid in speeding both the planning and installation of windows in industrial and commercial buildings, schools, hospitals, etc. Put your sash problems up to Curtis, and use their 76 years of experience in making sash and fine builders' woodwork. Write Curtis first for complete information on industrial wood sash.

1866

CURTIS WOODWORK

CURTIS WOODWORK IS SOLD BY RELIABLE DEALERS EVERYWHERE

CURTIS COMPANIES SERVICE BUREAU
Dept. PP-9I Curtis Building, Clinton, Iowa
Gentlemen: Please send me complete information about Curtis National projected wood sash units for industrial building.

Name .....

Address .....

City ..... *State* .....

CEMESTO OFFERS 3 BIG ADVANTAGES

for Fast Factory Construction With Steel Framing or Wood Framing!

Combines Strength, Insulating Efficiency, Good Looks

NO OTHER FINISH NECESSARY—INSIDE OR OUTSIDE!

ARCHITECTS are finding Celotex Cemesto a practical and versatile material for enclosing many types of industrial structures which must be rushed to completion. It has repeatedly demonstrated its ability to replace *combinations of materials* in hangars and ordnance plants, ammunition depots and storage buildings, assembly shops, machine shops, etc.

This product may be used with steel or wood structural framing, or reinforced concrete framing. It combines in one material—erected in a single operation—structural strength, proved insulation, resistance to weather, and resistance to fire. Its gray asbestos-cement surfaces do away with necessity for painting or other surface treatment. Its core is Celotex insulation board with a thermal conductivity of 0.33 per 1" thickness.

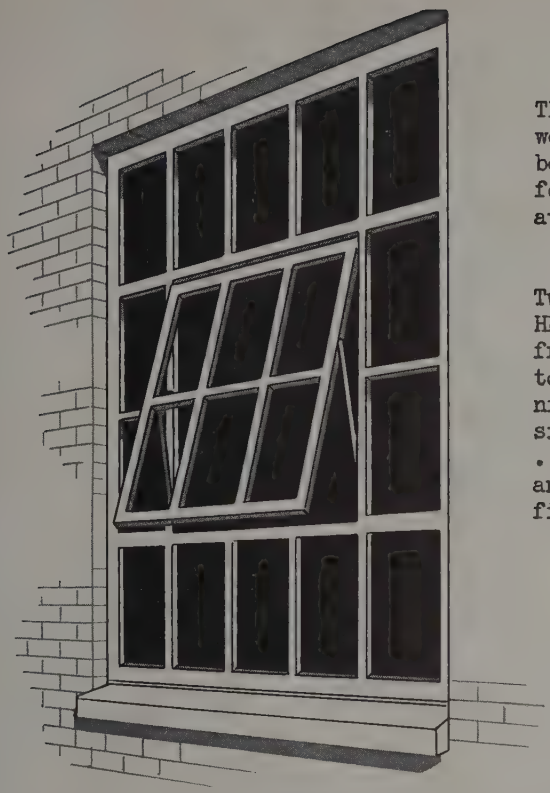
Standard thicknesses are 1 1/8", 1 9/16", and 2"; width 4'; lengths, 4', 6', 8', 10', and 12'. Weight, 3.8 pounds to 5.3 pounds per sq. ft.

Write for detailed application sheets and sample!

The word Celotex is a brand name identifying a group of products marketed by The Celotex Corporation.

CELOTEX
BUILDING PRODUCTS

THE CELOTEX CORPORATION • CHICAGO



This stronger, neater appearing wood sash has been designed for both old and new construction for which steel sash is no longer available.

Two styles: REGULAR (1-3/4") and HEAVYWEIGHT (2-1/2"). Sash and frame are of genuine white pine, toxic treated with Woodlife. Furnished for either inside or outside glazing. Don't risk delays ... specify this NEW PELLA SASH and be sure your jobs will be finished on time.

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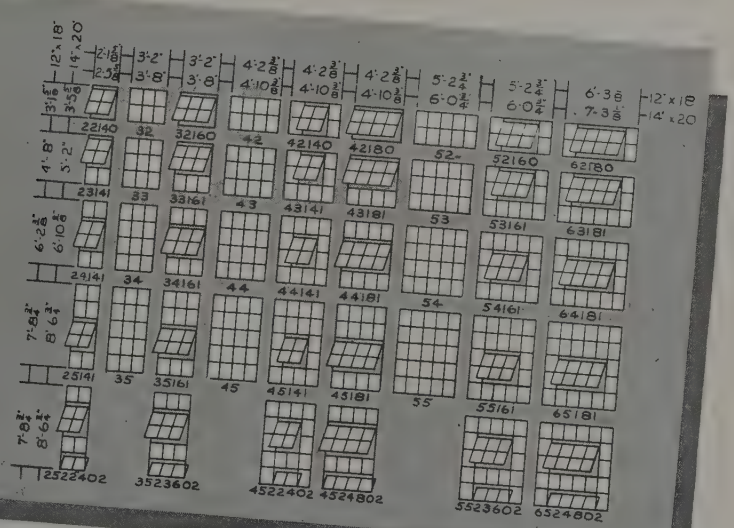

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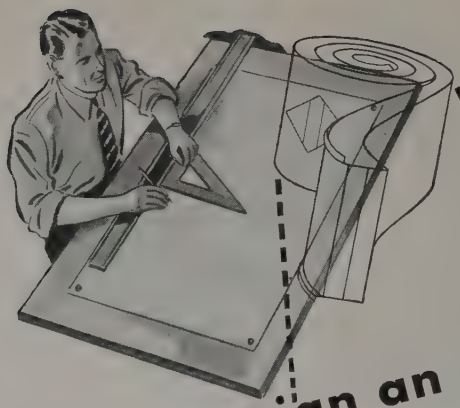

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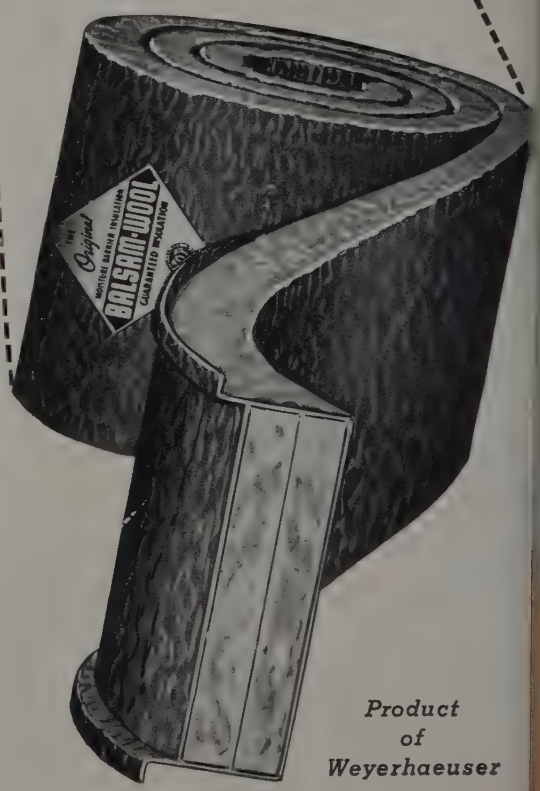

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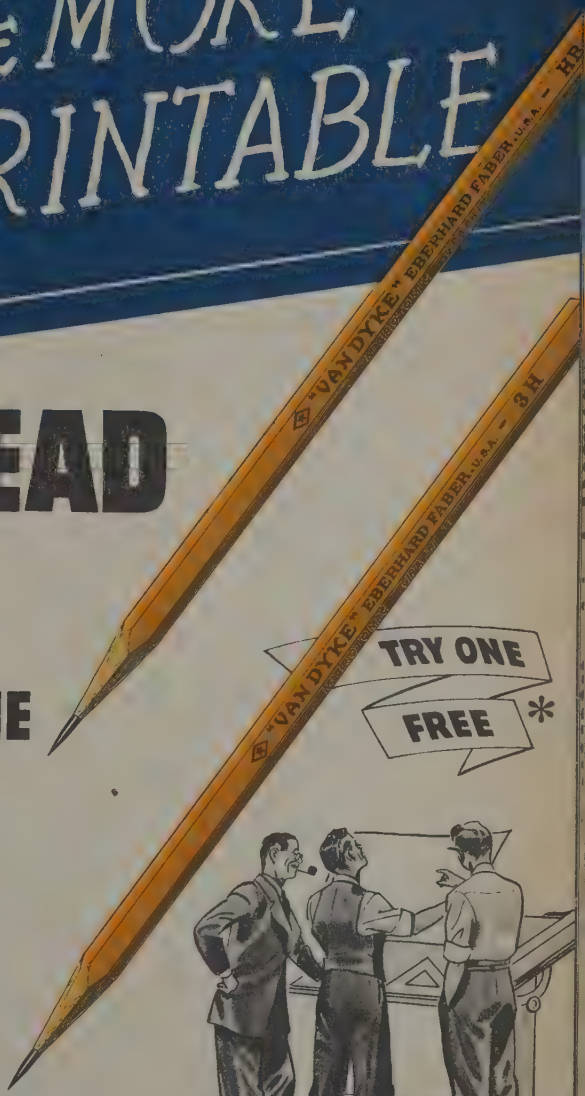

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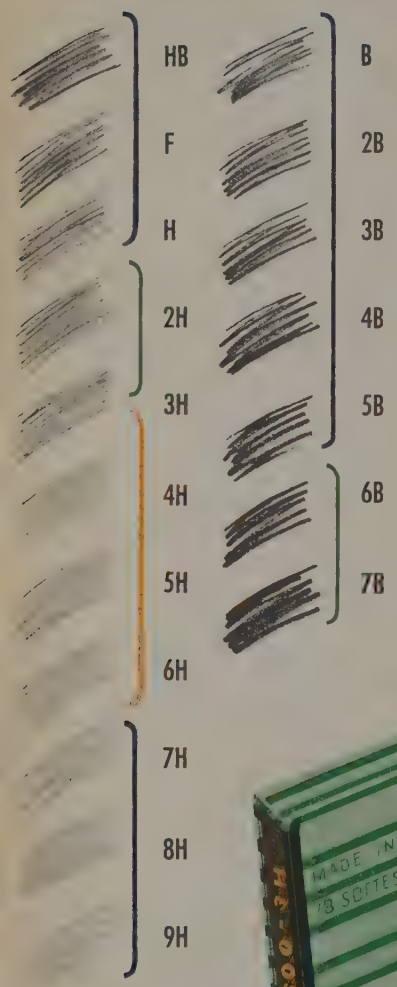

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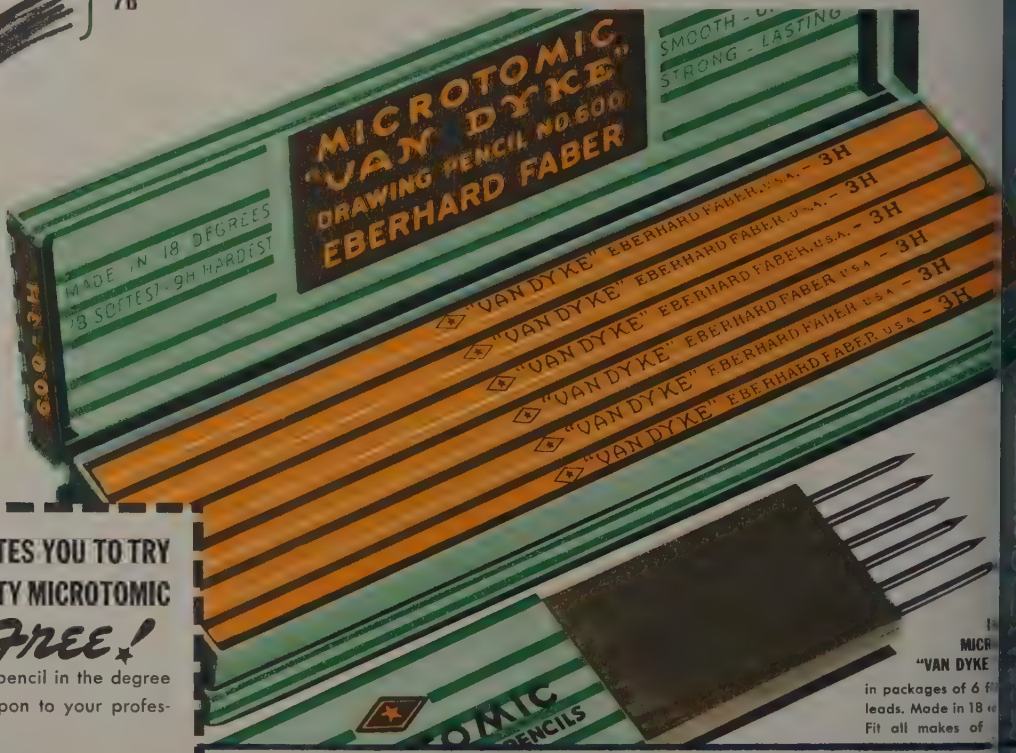

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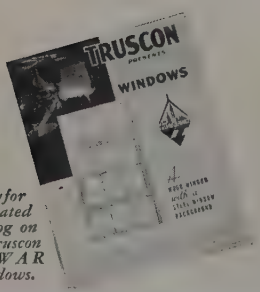

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The New PENCIL POINTS

SEPTEMBER
1942

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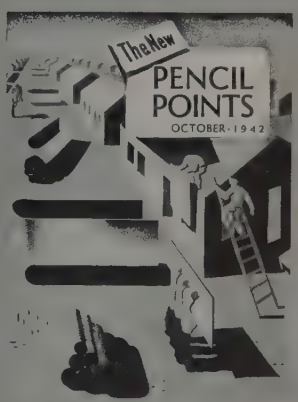
NEXT MONTH

The design of a complete Community for War Workers, consisting of 3000 prefabricated house units plus schools and other community buildings and facilities, is the sort of large-scale challenge that faces designers of today. As a case study and an analysis from the designing architect-engineer point-of-view of the special problems involved, we present in October the Kingsbury-La Porte project in Indiana, done by A. D. Taylor and Associates, of Cleveland, Ohio. ● Other items of interest in the issue include a Small Municipal Airport, one of the last completed before the application of war-time restrictions; a charming Low-Cost House representative of the better trend of modern design; a group of Selected Details of residential construction; and a discussion, by Arthur C. Holden, of some of the problems facing the architectural profession as it undertakes to organize itself for the future. ● A special feature will be the announcement of a new forward-looking Architectural Competition, sponsored by the Kawneer Company and conducted by THE NEW PENCIL POINTS, with William Lescaze as Professional Adviser. The official program will accompany the announcement.



BATTLE OF PLANNING

LONG before the guns finally stop rumbling and the last Nazi is ploughed under, another battle—a silent and unspectacular one—must be well under way. That is the battle to be fought by the planners against the forces of social and economic disintegration that are gathering behind the smoke screen of war, ready to loose themselves upon us once the disciplines of national military effort are relaxed. Preparation for this battle cannot be improvised at the last moment when Victory and Peace are in sight. We cannot afford to wait that long. The risk is too great and the stakes are too high, involving our country's future.

As Charles Killam has suggested in the pages that follow, the planners are not ready—at least not enough of them. In fact, there are not enough properly trained men available today to satisfy the immediate wartime demands brought by industrial expansion and moving populations. What, then, of the problems implicit in the situation that will arise later, when, to maintain national economic stability a vast program of urban rehabilitation, backed by both private and public capital, will be an urgent need?

The future job of rebuilding cities is obvious enough in war-devastated areas. Pictures such as the one opposite speak clearly of that necessity. But while sudden and cruel bombs have made England conscious of its unmistakable duty and opportunity, the erosion of greed and neglect has inexorably spread destruction of civilized values over increasing areas of our American cities, so that, for those who have eyes to see, we are presented with an identical challenge.

Competent planners must be found or developed. There is too little time to train young men from scratch to meet the impending emergency. Mature men and women, whose professional training and experience already include some of the fundamentals, must be converted by supplementary study to fill the ranks.

The American Society of Planning Officials, conscious of the need, has applied itself to the task of developing ways for retraining professional people—architects, landscape architects, engineers, public officials, lawyers and business men, social scientists, etc.—to fit them as personnel to augment the hard-pressed existing planning agencies. Arrangements are already under way with several leading universities to establish a series of relatively short, intensive courses for a limited number of qualified persons. These courses will be given in collaboration with existing city planning commissions or agencies which will help to make them practical and authoritative. Those architects who wish to be ready to attack the tasks that must be done can thus broaden their awareness of the social and economic factors of community design. Such training, added to their already acquired skill at physical planning, will equip them to serve their country well in helping to solve both immediate and future community planning problems. We hope that many will find it possible to accept the challenge.

Kenneth Reid

Destruction from the Ai scourging Man and all h works, is rankly bestial a it crumbles outward syn bols of our civilizatio such as Wren's nobl Christ Church, Newga Street, London (See Bri ish Press Service pho across-page). To resto it will be tedious. Th British will tackle it— doggedly as they no patch utilities and stree after each raid to kee their cities alive—and w wonder what concer Americans will have f the possible architectur casualties here.
Are plans being filed in safe place? Have subtl ties of design and stru ture been recorded? W friends of historic mon ments be alert? First: ar there many building worthy (architecturall not only sentimentally) restoration, if demo ished? Can you list five your own city?

ARE PLANNERS PREPARED

Apparently stimulated by the widespread oral and printed public discussion by planners of the subject of Urban Rehabilitation as a great post-war activity, Professor Emeritus Charles W. Killam of Harvard University School of Architecture, representing the point-of-view of hard-headed conservatism, was moved to send us, late in June, a challenging article in which he has raised many questions as to the validity of current theories. In search of answers to Professor Killam's questions we sent copies of his article to a number of competent authorities, asking them to shed light if possible on some of the points at issue. We present the results hereafter, as a sort of symposium which may help to stimulate more intensive thought about the job that will increasingly face all technical planners, including architects. The contributors to the discussion are as follows: Frederick J. Adams, Associate Professor of City Planning, in charge of the Course in City Planning and Housing at M.I.T., Cambridge; Charles S. Ascher, Regional Representative of the National Housing Agency, New York, and former Consultant for the National Resources Planning Board; Harold S. Buttenheim, Editor, "The American City," New York; Carl Feiss, Assistant Professor of Architecture at Columbia University, recently appointed Director of the City Planning Commission of Denver, Colorado; Arthur C. Holden, Chairman, Land Utilization Committee of New York Building Congress; Charles T. Stewart, Director of The Urban Land Institute, Washington; Robert B. Mitchell, Chief, Urban Section, National Resources Planning Board, Washington; Ralph Walker, Member of Mayor's Committee on City Planning, New York; Walter R. B. Willcox, Architect and Single-tax advocate, Eugene, Oregon.

The authorship of the comments printed on the following pages as far as possible in juxtaposition to the pertinent text, is identified in each case. Though the authorities seem to differ from each other on some details, due to divergent economic and social philosophies, they seem to agree that there is urgent need for intelligent study by many able minds if the post-war world is to live up to its promise.

Professor Killam establishes his background and general point of view in the following autobiographical note: "Born 1871. Twenty-one years in office of Peabody & Stearns, twenty-nine years in School of Architecture, Harvard University, part of the time as Chairman of the School of Architecture and Acting Dean of the Faculty of Architecture. Now emeritus. Lecturer in the Smith College Graduate School of Architecture and Landscape Architecture since retirement from Harvard. Teaching particularly in construction, accompanied by consulting practice. Author of notes on architectural construction. Some A.I.A. committee work. Former Chairman Cambridge Planning Board and Cambridge Housing Authority. Some experience in drafting building codes. Interested in problems of municipal government for many years and latterly in post-war economics problems having to do with the building industry, this study leading to doubts as to the expediency, feasibility and justice of WPA, USHA and continuous gigantic spending advocated by Roosevelt, Dr. Townsend, Wallace, Hopkins, Hansen, Greer, National Resources Planning Board, and others to free the whole world fom the fear of want."

1 Questions raised by Professor Killam are pertinent but are old timers. Most of them have been considered at National Planning Conferences at one time or another during the past thirty years, difference being that those raising the questions usually had a solution to offer—even if it did not meet with general agreement! ADAMS

2 Mr. Killam, in a mildly petulant and generally sarcastic tone, places before us some pertinent questions on present-day theories of Community Planning, some of which he answers himself and some of which have not yet been answered by anyone. His title, "Planners Unprepared for Urban Rebuilding," sounds not unlike a newspaper comment after Pearl Harbor. Planners can only have the satisfaction of knowing that no one else is prepared for urban rebuilding and that no one has had the temerity to reach a final decision on what constitutes a good city plan. FEISS

WHAT part can the building industry perform in post-war reconstruction? Anything which would increase building construction would have a great influence upon the employment and production situation because of the very wide range of the materials which are needed in the industry. (1) When peace comes there will be many powerful groups in Washington clamoring for Federal billions for their particular interests, some of them ready and anxious to spend public money to increase their profits and others claiming an altruistic desire to raise the living standards of the whole world and to free the world from fear of want, also by use of public money. Advisers of the Administration look upon a continuation of gigantic borrowing with equanimity if not with enthusiasm. (2) Rebuilding of cities is advocated by many because of great loss in values in general due to decentralization and the growing decay resulting in blighted districts

TO REBUILD OUR CITIES?

and slums. Before any large building program is started, however, we should consider whether we have developed a well-tested program for rebuilding. **The important fact is that the planning profession has not yet decided what constitutes a good city plan.** (3) We shall, therefore, be handicapped when we join the post-war crowd at Washington in clamoring for Federal expenditures for industry. (4) Other groups will be powerful and will have much more definite programs and, therefore, a better chance. We need to do a good deal more than merely to lobby now for an appropriation to pay us for drawings for Public Works Reserve projects.

The present discussion is particularly concerned with the rebuilding of medium and large size cities, not with cities of a few thousands. It is also assumed that cities are not to be deserted and that no nation-wide analysis now is going to change the location or essential functioning of long established cities. (5) It is too late now to look over our harbors, rivers, and railroad systems and pick out new locations for cities and then to specify the kind of activities which each of these cities should encourage. A condition, not a theory confronts us.

Numerous writers have told us that our troubles are due in large part to unplanned growth. They urge us to rebuild only in accord with master plans, national, regional, and municipal, and to develop cities with properly balanced land use, arranged in neighborhoods, more light and air, less traffic congestion and more amenities. As far as can be discovered, however, nobody has been definite enough to tell us just what this means, what kind of people, what kind of occupancies, what kind of buildings, and what kind of traffic ways they would actually advise in different parts of a city. Idealistic generalities, which do not crystallize and which disregard national, state, and municipal costs, do not help much. **There must be some basic principles which can be accepted and these should be published as definitely and concisely as possible.** (6) We need to know what principles are applicable in general to all cities so that local study can be concentrated upon local details.

3 By and large the planning profession has a pretty clear idea of what constitutes a good city plan. Trouble is to get public support to planning proposals and to financial backing necessary for carrying them out. Municipalities are not in a position to finance major operations on blighted districts, yet Professor Killam would disavow any solution involving Federal or state subsidy. What is *his* solution to the economic problems involved? ADAMS

Perhaps some of the inquiries probe for answers that are available. At least one plan for urban redevelopment (The Urban Land Institute proposal) contains a statement in precise language of just what it means by a good city plan. The FHA "Handbook" is prefaced by a full description of various components of a plan. STEWART

4 It should be noted that "our industry" is the way of life of half the population. Cynicism of "feet in the trough" attitude is not a fair picture. ASCHER

5 Mr. Killam's keen comments are hard to argue with. Most of what he says is obviously true. The expression of his personal prejudices at various points may be overlooked because they may throw us off the beam. Of course, planners can always magnify disagreements about a few details. For instance, "no nation-wide analysis now is going to change the location or essential functioning of long established cities," but no doubt Mr. Killam knows that economic forces are doing a pretty fair job of it up in his part of the country, as well as elsewhere. MITCHELL

The war is making this analysis for us ! ! ASCHER

6 Perhaps we need not entirely flounder in seeking basic planning principles. After all, there are certain standards, capable of rather wide application, that are known and used. We know, for example, that major thoroughfares which must carry a considerable volume of automobile traffic should be planned apart from streets intended for other types of traffic; but they should be free of frequent intersections; that the layout in most cases should be influenced more by land contour than by the straight edge. This principle is in use. We simply need to apply it more widely in future planning.

In the plotting of lots, we have found that a shape approaching the square more closely than the extreme oblong makes for better placement of dwelling structures and better utility of the land. Again, this is an established principle which can be grasped and used more extensively. We know that street surface designed for moving traffic does not make as suitable storage space for stationary vehicles as off-street terminals. We have put this principle into use and should expect to continue to do so. Population figures warn against overconcentration of land use in skyscrapers, and there is no reason to think that the warning will be ignored. Many other examples might be given. STEWART

See "Better Cities," by NRPB. Studies are under way of possible change in local taxation, treatment of tax-reverted lands, federal grants, their terms and conditions. ASCHER

We have many reports covering existin conditions in particular cities or particula neighborhoods. We have developed tech niques for gathering and publishing the re sults of such surveys. As to methods o carrying out rebuilding programs, a few states have passed statutes to help private en terprise to rebuild on an adequate scale an other states are considering legislation. (7) Has anybody done anything more than re ports? No appropriating committee is eve going to read a hundred local reports an look at a thousand spot maps. "Our Cities," a report of the Urbanism Committee of th National Resources Planning Board in 1937 states that local urban planning needs funda mental over-all guidance (8) based on plan ning and research by government on highe levels. "Housing—The Continuing Prob lem," issued by the National Resources Plan ning Board in 1940, states that there is ye little agreement as to what pattern of res dential development combines in the bes proportions attractiveness and livability wit economy of management and public utilit servicing. The "National Resources De velopment Report for 1942" of the Nationa Resources Planning Board states: "Befor we undertake large-scale rebuilding, certai basic policies must be established nationall and regionally: directives must be give broadly so that the city's officials and it citizens can see in the large their place in th state, the region, the Nation. We must hav first, some picture of the most desirable di tribution of the population nationally." **Is not still more important and practically use ful to establish basic principles as to the mo desirable distribution in a region, a state, o a city?** It is easy to deny this and to say tha each metropolitan district, each city and eac neighborhood is a separate and distinct prob lem on which we can get no help from estab lished basic principles or the experience o other cities. In all other activities, howeve political, business, professional, or cultural— we try to establish tested basic principles. (9)

We must have some agreement before w can expect the Federal government to spen billions on rebuilding cities and we must b ready with an agreed upon program at th end of the war. We must have somethin shorter and more definite than reports an spot maps, something more than assertion of our ability to lead. (10)

7 Of doubtful effectiveness. ASCHER

8 The type of "over-all" guidance that is needed is not the kind that we have been getting. The national planning agencies can suggest and stimulate and summarize. They cannot and should not specify. Standards should be set locally and decisions should be made in the locality. HOLDEN

9 Such "tested basic principles" always turn out to be such broad directives that they do not provide answer for local problems—or else they turn out to be such rigid formulas that they cramp desirable local solutions. ASCHER

10 It is easy to see that Mr. Killam would not be satisfied with the decision which planners would make at the present time. It is curious that he believes that the profession must make the final decision. It should be obvious that planners today who would dare to state what the final criteria of city planning should be could only be considered as suffering from a Messianic complex. FEISS

The National Association of Real Estate Boards estimates there are 40 billion dollars' worth of blighted urban areas. (11) Some writers urge that, after serious amendments of laws, parts of these blighted areas should be acquired by local governmental units with money advanced by the Federal government; the areas then to be used for public purposes or be leased to private developers. Familiarity with some of these near-in blighted and slum areas raises doubts as to the practicability of turning any significant part of these areas into public uses or open spaces. Open spaces are more needed in residential districts than in or near business areas. (12) If such areas are to be built up by private developers what sort of activities and what sort of buildings should be provided for? Do we need to provide low-rent housing on near-in land, costing $2.00 and up a square foot, because it is assumed that low-wage mid-town employees must walk to work? (13)

HOW MANY WALK?

As a matter of fact, how many do walk to their work? (14) If they insist that they shall be housed within walking distance of their work in business centers they must continue to live in sub-standard buildings on this high-value land. They have no right (15) to expect to live on near-in, high-value land in new 3-story apartments with 25 percent coverage and with playgrounds, neighborhood social rooms, wading pools and other amenities which self-supporting apartment houses on land further out cannot afford. Subsidized housing on the USHA basis is no solution for these areas. (16) Hansen and Greer, in "Urban Redevelopment and Housing," published by Urban Land Institute, December, 1941, state that at least 14 or 15 million town and city families and the majority of all farm families are unable to afford for themselves dwellings as costly as the USHA program has provided, and in one way or another these families will have to pay a large part of the cost of better housing for a small percentage near the bottom of the income scale than they can afford for themselves. The Government cannot keep that up. If this near-in land is not thus to be allocated to the low-wage, walk-to-work population how should it be developed?

A boarding house district is generally spoken of disrespectfully as a blighted dis-

11 The only figure I have seen as "assessed valuation" of slums is 40 billion. Philip Cornich, leading expert, contests this figure as grossly inflated. ASCHER

12 "Open spaces are more needed in residential than in or near business districts." Has Charles Killam ever heard of automobile parking problems and the congestion of traffic on streets? Has he ever considered the future of the helicopter? Has he ever witnessed the miserable, noon-hour, street-corner, lamppost hanger? The need for space in the urban business center is a very urgent one and if our neurotic modern machine civilization is to be solved, the senseless desert of brick and stone which we call our urban centers must be opened up and a large bit of the underlying land with its natural verdure be uncovered. The question is not what rehabilitation might cost but what the present desert has cost in inefficiency and constant waste. How can we make the growing ruin livable? Charles Killam would have us think that the present urban centers are justified economically? So!! WALKER

13 Also: "Do we need to provide low-rent housing on near-in land, costing $2.00 and up a square foot . . . . ?" Of course, in very few cities do you find this near-in land so expensive; but couple this with the later argument for high-density apartment building. I feel sure Mr. Killam has already estimated how much population could be housed in high densities in the present blighted areas of his home metropolis (without subsidy) and where this population might come from. Similar calculations by others have convinced the calculators they must not take the $2.00 and up prices too seriously *in any large scale rebuilding over a reasonably long period of time.* MITCHELL

Land values must not be determinant for land use in areas ripe for redevelopment. If land is worth $2.00 a square foot it must have some higher economic use than low-rent housing. On the other hand, if the latter is its most appropriate use, economically as well as socially, then its real value per square foot cannot be anywhere near $2.00. ADAMS

14 Astonishingly, a Gallup poll in December, 1941, showed that under 50% of auto owners used them to work; about 20% used mass transportation, and over 30% walked to work! ASCHER

"If they insist that they shall be housed within walking distance of business centers they must continue to live in substandard buildings on this high-valued land." In mediaeval times they would argue, "If a rat ate a sacred wafer would he be holy?" The land is now used for substandard housing because it cannot be used for any other economic need, so one might well question, "What makes the high value?" This would seem to be a vicious circle. The high value is only sustained by a hope of speculative increment, but it is also evident that in large parts of blighted areas this speculative increment has already been skinned off, leaving values caught and held by city assessments and as yet not written off bad loans. The real lack of realism is in Charles Killam's remarks because he cannot be aware of the doubtful fact that these blighted areas may never again have sufficient customers to maintain these fictitious high values. These unrealistic high land values are the nigger in the urban woodpile and are one of the main causes why all kinds of tenants may not have the amenities of good living, which Charles Killam refuses to low income workers. Charles Killam talks of costs of progress without considering the costs of present waste—the slum and blighted area at one time paid their way; made a profit in fact.

A clothing salesman was objecting to the high taxes saying, "It is always the same when they get a goose that lays the golden eggs. What do they do with it? They milk it, they milk it." To keep on with the mixed metaphor, the milked eggshells are the high values in blighted lands. WALKER

15 It's the community's right, not their right. ASCHER

16 There is no doubt that we have gone far astray in our ideas of the use of subsidies. Subsidies should be considered as temporary aids to establish logical and economic relationships. Subsidies should be used to correct the faults that prevail in real estate and construction. It doesn't correct these faults to do something so illogical as to use the best and most convenient land for homes for people who can only pay subnormal rents. HOLDEN

17 Private interests cannot operate unless at least a modest profit is assured. Except in a few instances the greater proportion of our blighted urban areas cannot be developed for a higher economic use than their present one. It therefore would seem unlikely that any self-liquidating program can be developed for extensive blighted areas, especially where land assessments are high. Toll-bridges, tunnels and transit lines can charge what the traffic will bear, but annual charges on landlords and tenants in blighted urban areas are already so high in relation to value received that both residents and commercial establishments are being driven away from these districts altogether. Lodgers do not normally pay any higher rent per room than low-wage workers, so this is no solution which would eliminate need for subsidy.
ADAMS

18 On the subject of neighborhoods, let me toss back another question: Admitting that for some groups of the population the neighborhood is not a social fact, could it be a useful municipal-service and political unit? Can citizen-responsibility be more in scale with the individual in the neighborhood than in the metropolis? MITCHELL

Mr. Killam rightly criticizes the National Resources Planning Board for assuming that one neighborhood pattern should be followed even if it were possible to determine an ideal pattern. The truth probably lies between Professor Killam's statement and that of the National Resources Planning Board. There is room for many kinds of organization and grouping. City-wide as well as neighborhood relationships must be given an outlet. HOLDEN

19 Mr. Killam asks for many studies which he believes should be made to pin the "idealist" to the mast. Mr. Killam has studied many of the reports of the National Resources Planning Board. He disagrees with many of the findings in them. However, it should be pretty clear to him, if he has read the reports as thoroughly as he indicates, that the planners are worried about the very things that he is worried about; that they have not yet been able to find answers but that they have been trying very hard to find them.

Why Mr. Killam fears the idealist is puzzling. Certainly there is very little evidence that the practical business man, including the architect, has found the answer. In fact all the evidence is to the contrary if we appraise our communities for what they really are. I, for one, believe that we need more idealism and that our plans have little validity unless they are aimed at objectives which may at the present moment be well out of sight but which are far better than anything which our business men and our so-called solid citizens have yet been able to accomplish.
FEISS

20 This apartment project contains 30,000 people, in itself a small city! ASCHER

21 What happens when "hard-headed realists" impute to idealists assumptions which aren't there? ASCHER

22 The authors of this NRPB report recognize that no absolute proof is possible of the hypothesis that stratification of social or economic groups is sociologically unwise or in support of their belief that the average citizen benefits by participation in associations representing neighborhood interests. However, in accepting the consensus of urban sociologists on these questions the authors surely are on somewhat safer ground than they would be if they relied entirely on individual opinion. In fact the question might be raised as to whether it is the NRPB or Professor Killam who is "challenging the habits of the people." ADAMS

Only a twenty-page pamphlet. ASCHER

Look at Georgetown, Washington, where Asst. Sec'y of State lives in same block with Negroes. Look at Greenwich Village, N. Y.
ASCHER

23 There won't be any illiterates after the war. ASCHER

trict. There are millions of lodgers to be accommodated. Where? (17)

The proposal for neighborhood units might be considered an example of definite planning. This means the division of a city into neighborhoods, each large enough to support an elementary school and each delimited to some extent by important traffic ways, railroads, water, parks, or some other physical element if practicable. The theory is that most people want to take part in neighborhood activities and that such activities are socially valuable and important. (18) In a city of 100,000 people there might be, say, 20 elementary schools each the nucleus of a neighborhood. Some advocates of the neighborhood scheme have argued that each neighborhood should be limited to people of the same social and economic character but the "National Resources Development Report for 1942" of the National Resources Planning Board urges the importance of rebuilding so as to develop neighborhoods.

FREE MINGLING

It also states: "One other principle should serve as a guiding idea in our large-scale rebuilding: we must avoid a pattern of stratification, whether by incomes, occupations or otherwise, which will produce self-contained colonies either of manual laborers or intellectuals or enterprisers, which will perpetuate areas marked as the exclusive preserve of persons of one language group or national origin. The challenge of our city rebuilder is to provide the opportunity for free mingling of all groups in our democratic society . . . " (19) The report criticizes an apartment project which provides no room of any sort in which groups of residents can meet to discuss common problems. (20) As usual when idealists follow their hobbies regardless (21) the report does not prove that people dislike stratification and it does not describe what kind of buildings in what kind of locations such a mixture of people would require. Nor does the report (22) prove more than a relatively small number of people want to get together for neighborhood discussions, nor does it explain why school buildings cannot be used for the purpose. Any proposal to house the well-to-do in the same neighborhood with the poor, the illiterate, (23) or immigrants, is an example of wishful thinking about the control of somebody else, but people

ple will still insist upon living and associating with their own kind. Much is made of the fact that some of the occupants of subsidized housing projects have formed neighborhood clubs but it does not follow that the more independent members of the population are equally anxious to club together. (24) It is a question whether neighborhood associations, with their tendency to work selfishly for the interests of their own districts, are as useful to the city as the large number of city-wide organizations in which people in all walks of life can find many different ways for social companionship and for social, civic, and religious activities. And many people in all strata of society are not interested in clubs anyway. (25) **The building industry has enough challenges to face without challenging the habits of the people.** (26)

The very common statement that a great majority of the people prefer to own their own homes and to live in a single house should be checked by a Gallup poll (27) of urban dwellers and should also be checked against the income and job security conditions of a majority of the population. People are likely to distribute themselves on the basis of the desires and possibility thus shown anyway. (28) There are a very large number of people who prefer a car to a house, who hate to work in a garden and who want to reach their work, their shopping centers and their amusements with a minimum of time and effort. Millions of them are unmarried or, if married, have no children or have children who have grown up. They do not need open spaces or playgrounds. (29) A reasonable development of near-in blighted or slum districts would seem to be apartment houses for this part of the population. But in large cities such development of high-value land, even for well-to-do people, cannot be on the extravagant basis of height and coverage of the USHA projects. (30) Opposition to apartment house development in general is non-realistic. (31)

LOCATING INDUSTRIES

Another very important question which is unsettled relates to the best location for industry. Should industries and their employees be located in the city, just outside the city or in rural areas? The "National Resources Development Report for 1942" of the National Resources Planning Board

24 Realistic proponents of the neighborhood unit idea in city planning probably do not advance their ideas to permit the formation of "neighborhood clubs" or community activities that function austerely at the rap of a gavel. I suspect that the real motive is to permit neighborhood arrangement and composition to foster spontaneous community activity that would not need to resort to such artificial trappings of neighborhood identity. They probably have in mind such neighborhood activity as saying "Good Morning" to one's neighbor, which somehow is not possible when people are stored at intense densities in areas of formless urban mass. STEWART

When their physical environment permits, evidence is strong that they want to get together for discussions. See "Radburn, A Way of Life." I thought the town meeting was an old New England tradition. ASCHER

25 Spoken like a true Cambridge individualist! I sometimes believe that more energy goes into voluntary activity in this country than into paid work — the church groups, fraternal orders, lodges, veteran's groups, bridge clubs, civic associations, etc. ASCHER

26 Unless the building industry recognizes the true desires of the people, it will continue to provide unsatisfactory rabbit hutches, instead of democratic communities. ASCHER

27 Professor Killam's suggestion for a Gallup Poll to determine whether or not people really prefer to live in single family homes seems unnecessary. In his realism he does not favor attempts to change living habits, and American living habits favor the single family home. A recent report of the Chicago Planning Commission points out that New York and Chicago are the only self-contained American cities in which a majority of the people are accommodated in housing other than single family homes. STEWART

This is now being done in sample survey by Gallup for Bureau of Urban Research at Princeton. ASCHER

28 We must recognize that people do have varied tastes. Because of the large number of people who would sacrifice much to have a garden we should not assume that there are not a great many who wouldn't prefer the compact city-type apartment with its teeming life. HOLDEN

29 Of course, they do — but with *adult* recreation facilities. ASCHER

30 Hansen and NRPB agree. It's the *imputation* of high value that must be done away with. USHA by statute was a prisoner of this imputation. ASCHER

31 Mr. Killam throughout his paper confuses two issues which have not been settled by the sociologist, the economist, the public administrator, the city planner, the architect, or anyone else. These issues are centered around, first, a definition of what planning really is, and second, a definition of what are our proper standards of living. There is a third issue which could be included also. This is the issue of democratic action as it relates to planning. Rexford Tugwell, several years ago in a very interesting document, stated that he believed planning could be considered a fourth power. FEISS

Here is one generality which if followed would improve urban life. "Tax neglect and subsidize progress."

Another. Cut all ideas of future growth to double present populations; then plan business and residential densities on that basis. There is sufficient land for decent living. The cost of the spread out of population can be no more than the cost of blight. The New York Zoning ordinance permits, within present possible envelopes, in its five boroughs, an estimated 330 millions of day and night population. Who is crazy, the planner who objects that this is nonsense or the realtor who hopes for an opportunist commission on a few but sizeable sales? Who is finally the waster of the communities' assets? The trouble with planning is not with the ideals of planners but in the compromises which the unthinking or the speculator persist in creating as obstacles. WALKER

32 A problem of the future will be the assembly and rearrangement of near-in land for industrial purposes. Efficiency need not be expensive. It ought to be possible to translate present wastes into better space, better arrangements, and lower rents.
HOLDEN

33 We have little reason for expecting industries to come back to the congestion and higher costs of urban centers, but it does not follow that workers need to live at inconvenient distances, even if protection from aerial bombardment is given full consideration.
ADAMS

NRPB has report on Industrial Location in preparation.
ASCHER

34 The old demand for salability and sovereignty of use for individual properties has required wasteful street patterns and wasteful utility layouts. We will not be able to revise our street pattern without a change of attitude on the part of lawyers as to the advantages or disadvantages of restrictive covenants, private rights of way, etc., and the dependability of individual properties upon the maintenance of a workable neighborhood pattern.
HOLDEN

The question raised as to the economic feasibility of a thinly scattered city is a timely one. Unless we are to proceed in complete innocence of municipal finance, our replanning will undoubtedly face the task of providing a sensible degree of civic compactness without congestion. With modern street layouts and lot arrangements there need be no dilemma in this.
STEWART

I am much impressed by Hansen's point that the cost of municipal services is not the full calculus, by itself. A full-employment economy must afford its workers access to as wide a choice of jobs as possible. To achieve this we may have to live together in larger groups, requiring more municipal services. But a home owner (a tenant) who has fifty weeks work a year would mind $100 taxes for local services less than a half-idle worker would mind $50.
ASCHER

asks: "Would it profit a town famous as a center of learning or as a haven for health seekers to attract manufacturing, if it thereby lose its soul? Is the indiscriminate attraction of industry—any industry—by any means—tax exemption and bonuses—wise?" (32) In this connection, the thoughtless boosters who think every addition of industries or workers to a city is an unmixed advantage should study the "Report on the Income and Cost Survey of the City of Boston, 1935," and other similar surveys. The "National Resources Development Report for 1942" of the National Resources Planning Board states: "Prior to the war, manufacturing was tending to become increasingly suburbanized. This trend has continued, for even under emergency conditions, the aim of many private concerns in locating a plant has still been to get close enough to a city to tap its metropolitan labor market and share its transportation facilities and privileges, yet remain far enough on the outskirts to have cheap land and lower taxes. The pre-war trends toward the suburbanization of manufacturing and the industrialization of certain new areas were accompanied by the establishment of industrial plants here and there in places apart from the main centers of industrial growth. To some degree this tendency toward dispersion has been continued during the emergency period." The discussion of industrial towns in "Urban Planning and Land Policies," Vol. 2 of the Supplementary Report of the Urbanism Committee of the National Resources Planning Board, should be brought up to date and amplified to include facts as to the advantages and disadvantages of decentralization of industry, remembering always that there are three elements to be considered, the employers, the employees, and the municipalities. **Must workers in industries live at inconvenient distances from the plants to reduce danger of bombs in residential districts in time of war or shall we assume peace to be the normal condition?** (33)

MUNICIPAL COSTS

We need more information as to comparative costs of municipal services to compact and to scattered developments. The advocates of more open spaces, lower buildings, and low percentage of land coverage in zoning codes should tell us the comparative costs

of compact and sparse development, not only to the municipality but to the people who must travel longer or shorter distances to work, shopping centers, and amusements. (34)

Can we reduce municipal expenses by abandoning some of the existing streets, leaving access to some houses only by paths as in many recent housing projects or would such street closings make it impracticable to deliver fuel to individually owned houses? Could such abandoned streets be turned into playgrounds for small children? (35)

Should we work for laws which will allow a municipality to find the final cost of a land taking before committing itself?

EFFECT OF TAXATION

The effect of the incidence of taxation on real estate has not been thoroughly investigated as to its effect on city planning and rebuilding. (36) For instance, how have graded taxes on land and improvements worked? Some cities have a single tax on land only and others have a smaller tax on improvements than on land, Pittsburgh, for instance, at half as much on improvements as on land. Such a tax shifts a large part of the tax burden to vacant land. Does it tend to lower land **prices** but still maintain land **values** because of the kind of development which it encourages? (37) Does it encourage a continuously graded intensity of land coverage from skyscrapers in the business center to single houses in the outskirts? What kind of buildings are built in different zones in cities where improvements are partially or wholly exempt from taxation as in many cities in Australia, New Zealand, South Africa, and a few in western Canada? Have such taxes led to congestion in business districts in order to make the improvements pay the high taxes on the land? How have such taxes affected the values of near-in blighted or slum districts? Have they led to a compact development of urban land from the center outward thus leaving no vacant lots by which streets and other services must be wastefully carried or have they led to the erection of cheap one-story taxpayer developments on lots which would otherwise have been left vacant? How have they affected single house building for the well-to-do? For the low-income group? (38) **These and other questions cannot be satisfactorily**

35 Mr. Killam asks for many facts and figures. He does not break them down into their several component parts and does not fairly indicate what in the collection of these figures belongs to the city planner, what belongs to the social scientist, what is the duty of the economist, or what is the proper concern of any other technician interested in urban physical improvement or the improvement of environment as a whole. FEISS

36 I certainly agree that the whole property tax system must be revised, although I do not believe that this is a responsibility of the planning profession. It seems to me that Professor Killam has given the latter enough to do in the preparation and carrying out of plans for urban redevelopment. ADAMS

The real estate tax ought to be subjected to a comprehensive study. There are times when public purpose is served by taxing land and exempting improvements. There are other times and places where it would better serve public purpose to tax improvements and minimize the tax on land. HOLDEN

37 In his series of questions on real estate taxation, Mr. Killam is probing a field where the mind of architect or planner has too seldom ranged. This field needs exploring; but to the extent that the study should be based on practical experience, its area lies mostly outside the United States.

With a few exceptions, such as some California irrigation districts and some tiny "single-tax enclaves" elsewhere, we have no communities in the United States where local property taxes are levied on land values only. The "graded tax" of Pittsburgh and Scranton is an important venture in the right direction, but the Pennsylvania Legislature has not yet seen fit to allow its cities to go far enough in this experiment to prove its real possibilities.

No system of taxation, no matter how rational, would in itself stop ignorant or anti-social developers from land-overcrowding: that problem must be solved by better planning and zoning. But if—within limits thus prescribed—we want to encourage new and better construction, it seems obvious that a reduction in the tax rate on improvements and an increase in the rate on site values would have important social and economic benefits. New construction would be encouraged, and desirable sites more readily obtainable. BUTTENHEIM

38 One could go on with other points but more important is the comment that these questions need earnest thought by both local and national groups. Many others could be added. These questions that start so bravely to limit themselves to the physical, immediately pop off into the less tangible economic and social fields and I guess architects will have to follow them there.

Some of us in government are working with these questions all the time and feel very humble before them. It is equally important for every city to be thinking through its problems—which can be very much more specific and easily conceived. City planning can no more start with physical layout than a successful hospital or industrial plant design. MITCHELL

39 There have been several such studies and pamphlets, which Mr. Killam can read if he will cross over to the Littauer School. Two have been published by Public Administration Service and the Municipal Finance Officers Association. ASCHER

Tax studies should include analysis of the operation of other forms of taxation. It should be recognized that economic forces tend to compel the circumvention of tax burdens. For this reason, tax policy must be designed to foresee the consequences of all forms of taxation. HOLDEN

40 I have no spirit at the moment to comment, seriously, on an article which presupposes the necessity of continuing taxation in any form; especially for architects who, in the field of taxation, seem to be happy to travel per "horse and buggy," as Professor Killam implies they are traveling in the field of the building industry.

I should not like further to impede their progress, as I am sure I would do, did I attempt to answer even a few of the dozen questions Professor Killam asks on taxation. Similar questions have been asked a thousand times, and each question has called forth dozens of opinions such as you now seek; yet none can deny that none of these questions and answers have availed in the least degree against the progressive increase of TAXES—destructive of architecture, of the architectural profession, destructive of our country.

I sometimes wonder if perpetuation of taxation generally is accepted as "The American Way of Life?" Are TAXES so sacred to our institutions that their extinction may not even be considered? WILLCOX

Yes—and plenty of people are working on the problem. NRPB Urban Section has studies under way now. ASCHER

41 Certainly, large-scale enterprise in the building industry will be essential if rebuilding of our cities and rural areas is to take place on a comprehensive basis. The public's aversion to big business will be a handicap unless the public can be aroused to take part in the ownership of large-scale cooperative neighborhood corporations. It will be necessary to recognize that a man can own his home by considering his property a part of his neighborhood. When the property owner learns that it is safer to own a part of something good and strong than to own the whole of something which is ailing and weak, then he will give his support to large-scale enterprise in real estate and construction. HOLDEN

42 It is absolutely essential that the public understand the Building Code situation and align itself with the demand for reform. HOLDEN

answered by municipal assessors alone—real estate men, city planners, architects, engineers, merchants, and industrialists must all be consulted as to results.

The demand of real estate interests for a tax limit on real estate should be accompanied by succinct and well-publicized information as to how such limitations have worked, whether they have increased investments or profits in real estate, whether they have resulted in reduced municipal services, whether they have been accompanied by sales taxes and whether the sales taxes have cost the low-income families more or less than the tax reduction due to the limits. (39)

If real estate were taxed on the basis of income instead of on capital value would it put a premium on holding land idle in anticipation of a speculative rise in value? Are there other objections to such a basis? (40)

PRIVATE BUILDING

Architects should do their part toward encouraging private enterprise to undertake building development as far as practicable in place of Government building by subsidies. Insurance companies, banks, trusts, and foundations have billions of money invested in Government securities paying low rates of interest and in realty mortgages. (41) Can laws and customs be changed so that these institutions can be persuaded to invest directly in large scale rental housing for different income groups? It has been suggested that the Federal government might help this effort by guaranteeing a minimum return plus the whole of the principal. Should FHA legislation be amended so as to aid in rehabilitation of blighted districts? Should institutional lenders be urged to cooperate in blighted districts so that there will be general neighborhood rehabilitation instead of spotty individual residence repairs?

CODES OUT-MODED

The building code situation is unsatisfactory. (42) If great sums are to be spent on construction, codes should be brought up to date, standardized as far as practicable and unfair and uneconomical provisions eliminated. What is more fundamental, the political and legal limitations which now make it difficult to write a good code, difficult to enforce it, and above all difficult to keep it up to date, should be changed. For instance,

the "Plumbing Manual" and the "Recommended Building Code Requirements for New Building Construction" issued by the Federal government cannot be generally adopted because many provisions are covered by reference to ASTM or Federal standards instead of being printed in full. (43) In some jurisdictions at least, such reference to standards is not allowed. **As far as practicable, building codes should be written and amended by committees of experienced technical men, not by politicians.**

43 This is the least of the obstacles. ASCHER

44 I like what Professor Killam says about the Architect preparing himself with *sound understanding* so as not to be misled by the unthinking people who mean well but know nothing except that they want a "better world." Too many people are over-ready to try any expedient on the chance that it may effect a magic cure. The Architect must not follow this sort of leadership even if the "better world" people suggest a subsidy for construction. HOLDEN

45 Dear Mr. Killam fulminates against the "better world" advocates, but comes out with nothing different from their proposals. He starts as though he were going to emphasize some new principles of land planning and civic design, but comes out just where "Better Cities" comes out—that the real stumbling blocks are our legal, administrative, and economic institutions. He simply is not aware of the work going on in these areas. ASCHER

46 There is certainly a great deal that the architectural profession can do to assist in the redevelopment of urban blighted areas and I agree in general with many of the points Professor Killam makes. However, my own opinion is that architectural, engineering, and city planning techniques are much further developed than are the techniques of municipal finance and public administration; that technical planning skill will not be found wanting when the opportunity for putting it to effective use is presented; and that the fact must be faced that the real obstacles to sound and comprehensive urban redevelopment are political and economic rather than physical. This is not put forward as an alibi for the planner but its recognition would eliminate a lot of waste motion by professional groups which feel that the solution is their entire responsibility. ADAMS

47 Let the architect not be too modest. Let him provide some of the needed leadership. MITCHELL

48 I recommend to Mr. Killam Mr. Charles Ascher's "Better Cities," published this year by the National Resources Planning Board. This might be called an Atlantic Charter for urban planning and sets up plenty of goals to shoot at. I thoroughly agree with Mr. Killam's paragraph on the need for architects to acquaint themselves with civic problems. Some of us have been urging this for years and have been attempting to interest the architect in what has been considered by the profession as extra curricular. I would recommend that if Mr. Killam really wants to study standards he acquaint himself with the standards established by the Committee on Hygiene of Houses, of the American Health Association. These are, in my opinion, the best standards which have so far been set up scientifically by any institution in an attempt to reach working criteria on architectural design and community planning as it relates to residential areas. More of this kind of study is needed. FEISS

49 That the planners are not ready is no indictment of them. That the country is not ready to accept planning *is* an indictment of our profession, our technical men, of our citizenry at large. If the material for planning is not ready at this time it is not because the planners have not tried to prepare it. Mr. Killam will find, in any good planning library, the evidence that planners have long been working on the subjects he worries about. FEISS

I don't at all like Professor Killam's last sentence. Certainly the most important thing for Architects to do is to cooperate with other elements as he says, but we should not assume that we can quickly furnish definite specifications for physical planning. We can give direction to physical planning but do not let us be too definite about whither planning may lead us. From time to time we will furnish specifications for physical construction and change, but planning itself must be the result of careful analysis, diagnosis, and the formulation of a program. HOLDEN

ARCHITECT AS CITIZEN

There is of course every reason for the architect to be a good citizen and, particularly at present, that means study of all of the problems of these changing times. He needs to know something of the character and costs of municipal services as affected by real estate development, something about taxation. He needs to have a detached, informed and fair point of view as to the best way to spend public money. (44) He should not be too much influenced by reformers or "better world" advocates who do not care where the money comes from. (45) An illiterate and civically inexperienced architect is not likely to be very effective as a leader in bringing forth a better society by mere assertion of his importance. The architectural profession is a numerically unimportant part of the building industry. (46) The profession has no such numbers as the legal, medical, and engineering professions nor does it command the respect that they do, particularly in war time. The industry of which we are a part is under continual criticism as being backward, disorganized, inefficient, and suffering from monopoly, collusion, and rackets. The architects' present influence is so small as compared with other more dominant groups that he is not likely to be important as an "architect-leader-citizen," as a leader for a "better society," a "humane civilization," "social gains," or for a world relieved from "fear of want." (47) **We had better do our part of the job so well that the public will respect architecture as a profession and building as an industry.** (48)

Our own job now is to cooperate at once with all other elements in the whole industry, we to furnish definite specifications for physical planning for urban rehabilitation when the peace comes. (49)

WHO'D SERVE MUST SEARCH!

ARTHUR C. HOLDEN

THE place of the architect in the productive process is shaped not alone by the things that need to be done but by the capacity of others besides himself to perform services. That breadth of understanding which we insist is the prerequisite of the successful architect, must include an understanding of the forces which compete with him.

Let us suppose that, in a given region, the number of buildings needed is exactly known. It does not follow that the public in this region will turn to architects as best qualified to satisfy these specific needs.

Architects recognize this possibility, but being a conscientious hard-working group, they take philosophically repeated evidences of lack of appreciation on the part of the general public. But no matter how devoted to their principles architects may be, martyrdom is not a practical method for daily procedure. Consequently, the suggestion is frequently made that the way to combat lack of appreciation is to "sell the architect to the public." Sincere efforts at salesmanship, however, are too often unsuccessful, not because architects do not have a good product for sale, but because they are **abysmally ignorant of the products and services which are offered by their competitors.**

THE ARCHITECT FACES "COMPETITIVE FORCES"

Architects must remember that they are not competing solely against other architects. When the public seeks to satisfy a need, it turns first to the type of specialist which seems most evidently equipped to satisfy the specific need. Super-specialists are already in existence who have made it their business to concentrate on some of the particular functions of the architect. At one extreme there is the **stylist** who emphasizes design from the point of view of aspect. At another extreme is the efficiency engineer who emphasizes the approach by way of co-

ordination and management. Both functions are part of the service which the architect is or should be equipped to render. The architect, however, has been eclipsed in salesmanship by competitors of this type whose focus is more specific.

THE PUBLIC WANTS RESULTS

The architect would be a better salesman of his own ability if he were to place more emphasis upon the relationship between his own work and the work of others. He should recognize that just as others can perform many of his functions, so he may develop capacities for rendering auxiliary or related services, and thus broaden his usefulness. Above all the architect should recognize that the public cares more about results than it does about the agent through whom the results are obtained. A very good case in point is that of the real estate developer or developing builder. His method may differ from the method of the architect but his service includes the more obvious part of the architectural function, and he produces a final product ready for use by the public. In many ways the architect, with his more limited approach, stands at a distinct disadvantage beside the developing builder, yet functionally there is no reason why the architect cannot assume a similar role.

Irrespective of whether an individual architect may or may not intend to become a developing builder, **architects in general should recognize that they are concerned in the development and redevelopment of real property.** The architect's function touches the function of the real estate administrator just as fundamentally as it touches the function of the structural designer and builder.

THE BLUEPRINT IS A RED HERRING

The architect has suffered because he has permitted himself to be thought of as a mere draftsman who produced blueprints, rather than as a man trained to analyze a problem and offer a solution.

Architects have truthfully emphasized the fact that it costs money to produce drawings, especially complicated and exact scale drawings. In doing this, however, architects have built up a psychological obstacle against themselves. The public needs competent advice much more than it needs perfect drawings. As a matter of fact, the public has learned that it can get the minimum drawings required from those who furnish various essential materials. The plumber will gladly make a plumbing plan in order to get the plumbing work. The heating contractor must make shop drawings in order to put his materials together; he will gladly furnish all the drawings necessary if he can get the work. The steel fabricator will gladly furnish all needed structural steel drawings if he can get the business.

Lumber for the small frame house has customarily been cut and set at the job. Formerly the carpenter was expected to work out the dimensions of framing members and to employ his skill in putting them together. Although some sort of diagram is needed by the carpenter to lay out his frame, something far less complicated than the architect's plan will suffice. Indeed, typical architect's plans for small houses often neglect to give basic information needed for laying out the framing members. Lumber supply dealers want to sell lumber and carpenters want the job of erecting houses; therefore it is not unnatural that both lumber dealers and carpenters should be quite willing to supply diagrams which they have already successfully used, in order to get more work.

The architect has not always been awake to the significance of competing forces.

WISE SUBDIVISION NEEDS THE ARCHITECT

In the larger aspects of design, where the group arrangement of buildings is to be considered, the architect is brought into unintended competition with many types of specialists. The surveyor's real work is the determination of legal boundaries between parcels of property in such a way that they can be described in the deeds prepared by specialists in the law. Accurate surveys for record are an essential part of any development; but record surveys should be distinguished from reconnaissance surveys. Surveyors, in order to get work, have been furnishing serv-

ices which are properly the province of the designing architect. As a result of this situation, the public has had property sold to it with boundaries determined by the terms that can be most conveniently described by lawyers and surveyors. Property has been laid out as though it were a commodity to be easily exchanged. Accordingly, the very form of our cities has been shaped as much by lawyers and the surveyors who have worked for them, as it has been set by architects. So far as cities are concerned, architects are expected to do their best within lot and street lines established by others. Architects, instead of being leaders, are too frequently mere accessories after the fact.

THE RURAL NEED FOR ARCHITECTURAL AID

If an architect were to ask himself, "What does my profession mean to the farmer?" the answer would not be one to enhance his self-respect. **The farmer looks for help to the man who has studied his problems.** The architect has given little thought to the farmer because he has been too much absorbed in his own difficulties and his struggle to get work in city and suburb. It has been the salesman of conveyor tracks and tackles and the salesman of pipe stanchions and ventilating machinery, plus the ever-ready lumber dealer, who have come to the farmer's rescue. If a farmer can scrape together enough cash to pay for a conveyor system, the obliging salesman will be willing to furnish him with a stock set of plans for the barn, and he will also go to no end of trouble to help the farmer to secure the financing needed to build his barn.

The forces which have changed farm life have been mechanical. The decline in the importance of the horse had its effect upon the fields where hay was grown and upon barns where hay was stored, and upon the economy of the farmer who was confronted with the need for an annual outlay for the purchase of fertilizers, plus larger capital investments for tractors and other types of farm machinery. These were changes which took place quite outside the comprehension of the architects, except that architects seemed to realize that the day had gone by when farmers possessed surplus capital with which to build themselves better and more commodious homes. Hence architects as a group looked away from the problems of farms and rural communities because they seemed no longer attractive to their particular talents.

Few architects are in touch with the mechanical and economic changes which are still taking place in rural life. Farmers can send a few postage stamps to the U. S. Department of Agriculture or to the State agricultural colleges and receive circulars of advice on subjects ranging from the installation of sanitary equipment to the preservation of foodstuffs. Architects have neglected to keep themselves posted on what is being done in Government bureaus and have failed to make themselves useful local interpreters and advisers with respect to the carrying out of information which has to do with construction and physical change. Recent developments in refrigeration, canning, and packaging, alone, suggest that **architects who are sensitive to these trends might again make themselves useful to the rural community through aiding in developing types of small co-operative plants and stations that could give to groups of farmers advantages which none of them as individuals have yet been able to afford.**

Under the leadership of the Federal Government, experiments have been initiated to study the problem of the farm community. This has been on much the same plane as governmental attempts to deal with the housing problem. The powers of government can cut the Gordian knot of economic obstacles and create patterns of model farm communities. This does not mean, however, that the way has been found to make available to all farmers the delightful things that can be thought up when economic considerations are temporarily brushed aside by governmental resources. Architects can make the decision as to whether they would prefer to become employees of the government upon governmental demonstration projects or whether they desire to address themselves to finding out how to overcome the economic obstacles which have prevented the great bulk of farmers from utilizing the technical capacity which architects are capable of rendering. **Upon the attitude of the architect will depend whether the development of the rural community is to be shaped by the force of example furnished by governmental ex-**

periments, by the contributions of vendors of mechanical improvements, or whether it is to be moulded by a co-ordinating force such as the architect should be able to wield.

ARCHITECTS MUST LOOK BENEATH THE SURFACE

Although the urgency which furnished work for architects at the crest of the boom periods in the past cannot be counted on to keep them continuously employed, it is clear that both during and after the war there will be new frontiers which will call for a high degree of initiative and ingenuity. These new frontiers are hidden beneath the ordinary happenings of daily life. They are evident only to the man who looks beneath the surface and attempts to understand the forces which mould social and economic life. If architects are to cope successfully with these forces they must be alert to key their work into the work of other professions and trades. They must know how and by whom farms can be equipped. They must know how great cities grow and how to direct their growth. They must know how villages expand. **They must make it their business to know whether the thousands of small houses which are built each year have all the quality which modern technology is capable of producing.**

If architects know they have the capacity to give a better service than the public is getting, they should do whatever is necessary to give the public the benefit of that service. **They should not waste their time complaining about lack of appreciation.**

Wherever architects may be carried by the war, let them observe how people live and behave. Let them seek to serve people and to demonstrate that technical advances exist to be enjoyed by all.

It is clear that the architect, at least the architect in the restricted position into which he has put himself today, has been slow to recognize the forces which sway the combination of trades and professions by whose joint effort farms are equipped, cities are laid out, great modern buildings are built, and thousands of small houses are produced. Let the architect shift his position. He will be less bruised by the jolts of society. It may be that by thinking less of his own prerogatives and more of society, he may even be able to lessen the jolts which society has been accustomed to receiving.

WASHINGTON RESUMPTION

The A.I.A. announces the appointment of D. K. E. Fisher, Jr., Baltimore Architect, to succeed Edmund R. Purves as Washington representative for the profession. Mr. Fisher will assume his new duties at the Octagon House, in Washington, on or about September 15, 1942. The appointment culminates a two months' search for the right man to do this important job—a search made doubly difficult by the demands of Army and Navy which called out several candidates while negotiations with them were under way.

Mr. Fisher is an excellent choice. He is vigorous and aggressive and well aware of the responsibility and opportunity for service he has accepted. He has an excellent background of education and professional practice which equips him to be an able spokesman for the architect in general.*

In accordance with the vote of the delegates to Detroit last June, it is the desire of the Institute membership that the type of activities carried on up to that time, by both Institute Representative Edmund Purves and PENCIL POINTS-sponsored Willis A. Vogel, should be continued under Institute auspices. It thus devolves upon Mr. Fisher to act as liaison officer between the entire profession and the Federal Government legislative and administrative departments. It will be his duty to assist architectural men in every possible way to establish contact with sources of Government work whereby they can be of service in the Victory effort.

«««« »»»»

It may not be amiss at this point to point out that a fundamental, though temporary, change has taken and still is taking place in the architectural set-up. When the War began, the great majority of architects were maintaining their own independent practices. With the development of priorities and restrictions on private building, more and more architects became salaried employees of the larger architectural or engineering offices, of large corporations, or of Government. In these capacities they are still functioning as architects, but with somewhat different economic positions.

We have no statistics on the extent to which this change has proceeded, but we hazard a guess that more than half of those architects who are actively working today are in the position of employees. No man can say how long this condition will last, since that depends on the duration of the War and on the possibility of post-war planning getting effectively under way.

This being the case, the thought arises that the A.I.A., as the recognized national representative body, might be called upon to deal with some of the abuses of the rights of employees that appear to be cropping up here and there.

We have a letter from an architect now working as an employee on a war project in which he describes some of these abuses.

"As our country goes more and more 'all out' for the war effort our engineering, architectural personnel and kindred professions become more closely aligned with defense projects, since private building has almost ceased.

"This means that our services are often arranged when an advertisement (sometimes blind) permits us to establish a contact with a concern of whom we know absolutely nothing; its history, policies, contract terms with the Army or Navy, the duration or scope of the project; nor is it possible to procure information concerning these items.

"In the majority of cases, salaries offered to competent engineers and architects are insufficient to afford consideration of the temporary nature of employment, the high cost of living in these areas, and the necessity of providing for two places of residence as may be required.

"After acceptance of these positions men have found that, without cause or previous agreement, salaries have been reduced, hours increased, restrictions enacted that confine their movement or customs under which they had been previously employed. Often those in charge are thoroughly incompetent, unable or unwilling to accept any responsibility.

"Without any 'deadline' warning to their personnel these employers, together with other organizations, seem to have reached an agreement that prohibits men from leaving one organization and procuring employment from other defense projects, or even corresponding with other organizations through which future employment might be obtained."

Without suggesting that the A.I.A. should function as a labor union, we suggest that some consideration might be given to ways and means of dealing with these and allied problems. **K. R.**

*Member of firm of Taylor and Fisher, Architects. Graduate of Princeton and M.I.T. Over 20 years of general architectural experience (design, specifications, and supervision). President, Baltimore Chapter, A.I.A., 2 years, Board, 6 years; President, Building Congress and Exchange, 2 years, Board, 4 years; Member, Mayor's Committee on City Plan, Baltimore, 2 years; Member, Advisory Board, School of Architecture, Princeton University, 7 years; A.I.A. Committee Construction Industry Relations, 2 years; A.I.A. Chap. Committee Baltimore-Washington Regional Plan, 6 years; Vice-Chairman A.I.A. Committee on National Capitol.

ASSEMBLING THE TURBINE, GRAND COULEE

Conducted by Major Hutton of the Bureau of Reclamation, we went down about six stories below ground level, in the Power House, and came onto this scene. The turbine was being assembled; it just happened that the large section of pipe was being lowered as we stood there. Aside from pictorial elements, the scene seemed to suggest quite a lot about generating power. Fortunately, the heavy casting was being lowered very slowly; even at that, one had to sketch rapidly to get things in reasonably accurate location. I knew right away that New York friends would accuse me of exaggerating scale so I got the Bureau's photographer to record the scene at the same moment the sketch was under way; his photograph is Exhibit A in support of the contention that the men shown are *not* 4'-6" tall!

The sketch was made with Pluvius pencil on a pad of tracing paper; the final drawing, after return to studio, was made with Wolff crayon, paper stump, kneaded eraser and kid finish bristol board. Thus, the final is made with tone, the sketch more with line, and I prefer the sketch.

Hugh Ferriss

WAR, VICTORY, A NEW WORLD

Students Replan An Industrial Center

IN THE belief that decent shelter, attractive neighborhoods, recreational facilities for all, and improved public services **must be planned now** if there is to be a higher standard of living in the post-war world, the Seniors in the School of Architecture, Washington University, St. Louis, undertook early this year to redesign near-by Granite City, Illinois, as a city planning problem. The objective value of the project that resulted—in which students and faculty of the entire School of Architecture collaborated—is suggested by the presentation on the following pages. The photographs reproduced were selected from those comprising an exhibition of the Granite City Replanning Project. Maps, plans, and models made by the students to represent the transformation that might take place after the pressure of war production has lessened, were shown.

Significant was official cooperation given the student architects working under the guidance of Professor Joseph D. Murphy, by the civic leaders of Granite City, notably the late Mayor M. E. Kirkpatrick* and G. Hayward Niedringhaus, President of the Granite City Steel Company, whose grandfather founded this unit of St. Louis' industrial East Side, about five miles from the center of the metropolitan area.

The exhibition filled two galleries of the St. Louis Art Museum for two weeks in May. Mayor Kirkpatrick, Chancellor Throop, of Washington University, and local A.I.A. leaders were special guests at the opening. Every effort also was made to publicize this project of the Washington University student architects as vital propaganda for **post war planning now.** The "Granite City Press-Record" featured a series of articles explaining the exhibit and pointing to the tangible values that could be realized, for the profit of Granite City, if the replanning is carried out.

Four sections of the exhibit reflected the divisions within which the students' work was pursued. In order to prove their thesis —that human resources devoted to regeneration of an existing community could halt or avoid all the ills of the neglected sub-standard areas that burden too many American communities—they proceeded to study:

1. Traffic and Transportation. To avoid congestion within the city and provide communication with the surrounding region.

2. Commerce and Industry. To zone areas for greater convenience and attractiveness, and promote growth and permanent values.

3. Housing. To assure every American family a livable shelter at reasonable cost.

4. Civic Works. To provide better facilities for Health, Education, Recreation, and Government.

Central feature of the exhibition was a large model at a scale of 1″=150′ representing Granite City with the proposed improvements and existing development integrated. This model map, reproduced on the cover of this issue of THE NEW PENCIL POINTS, effectively shows the conclusions reached by the various student groups collaborating in the project.

In order that the entire School of Architecture, Architectural Engineering, and Interior Design might take part in the replanning of Granite City, problems of the buildings needed were given to all the Classes for solution. Studies of housing were carried to the design in detail of individual and row houses similar to those already built under USHA in Granite City.

*"Mayor Kirkpatrick, who was one of the most noble, honest social-minded men I have known and one who had the respect of labor and capital alike, died on July 8"— Professor Murphy

REPLANNED GRANITE CITY

A survey of existing traffic conditions was first made, including points of congestion and danger, sources of traffic, destination of traffic, and traffic flow over main streets. The problem was then studied for redistribution of traffic flow, relief of congestion, and safe driving conditions.

It was decided to take the traffic flow out of Granite City, from the center of town by the most direct route, and then, by means of two express highways, by-pass the towns of the immediate vicinity directly to the McKinley Bridge at one end and toward Alton on the proposed Riverview Drive, on the west side of town, and toward Edwardsville, on the east side of town. The two main outlet streets carrying the traffic to the express highways are Niedringhaus and 24th Boulevard. These streets were developed so as to carry a maximum amount of traffic away from the center of town in a short period of time. Both streets were supplie with viaducts over the railroad tracks at th west side of town.

A cloverleaf overpass was designed at th intersection of 24th and the new expre highway on the western periphery and sim lar structures can be placed at the other fou intersections if so desired. The express high ways are composed of two 25-foot strips c concrete divided with an 18-foot parkwa The **traffic flow through the civic centers handled by restricting parking** from Madiso to Delmar along Niedringhaus. Stop ligh were provided at the intersection at Madiso and Niedringhaus; and at Edison and Nie ringhaus, with provision for left turn c white light and right turn through corn drive at all times. All other intersectio are well provided with Boulevard Stops wi no Left Turn because of very sharp 45-d gree turn in that direction.

One other thing that has been planned with the purpose of relieving some of the apparent congestion at seemingly unimportant points: a quick glance at the map of old Granite City will reveal streets handling a moderate amount of traffic that suddenly run into dead-ends; they lead into the middle of another block with no possible means of continuing traffic along the same general direction. Such is the case on Niedringhaus to connect with 24th Boulevard. This naturally causes points of needless congestion. To remedy this situation, **it has been planned in some cases to continue the streets through the dead-end.** In some cases this necessitates the wrecking of a few houses, but most of the proposed continuation is through vacant property or through slum areas. Improvements in streets have been suggested not with the idea of beautifying certain areas, but to relieve congestion.

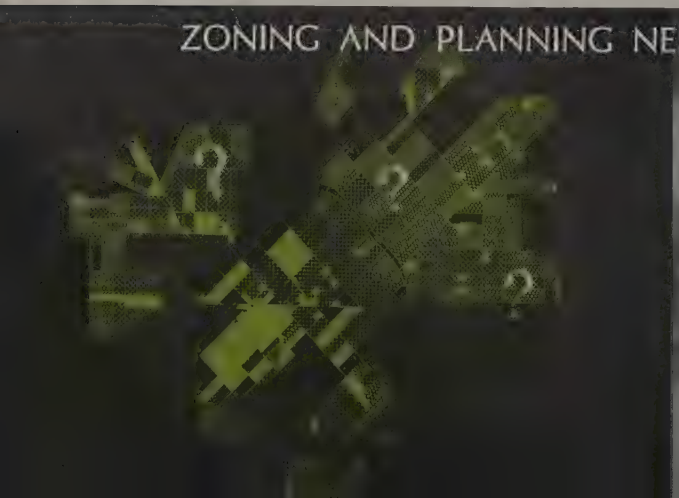
REPLANNED BUSINESS AREAS

Granite City exists because of its great industries and there is ample space for the expansion of industry as well as of the living facilities of the city. The lack of zoning, however, has caused a certain unplanned growth which is detrimental to the community as a whole. The city is surrounded by heavy industries to the south, west, and east. The northeastern part of the city has as yet been untouched.

Modern industry, so well typified by modern Detroit, sets the high standard that **almost any industrial building can be just as clean, healthful, and beautiful as one's home.** To have a well-planned town with due consideration given its employees and their families for cleanliness and health, Granite City should carefully consider the problems of zoning, smoke elimination, and additional sewering.

Transportation facilities in Granite City are excellent, in that several railroads offer full service adequately to the surrounding industries. Unfortunately, due to the scattered centers of these various industries, the city has too many highways crossing these rails. As is brought out in the "Transportation Division," these problems have been best resolved by means of viaducts, and overpasses at chosen centers. The Missis-

ZONING AND PLANNING NEEDED



ippi River offers an excellent thoroughfare or the expanding river traffic. Since the city s close to the river, **loading docks and depots vill surely develop** along the riverfront adacent to Granite City.

In addition to the necessary modernizaion of industrial buildings, **the downtown usiness district should be replanned for reater shopping convenience.** We also sugest the immediate adoption of the area outh of 20th Street and four blocks wide o Madison Avenue on Edison, to be zoned or local commercial establishments. We ropose an area covering the southern end f four consecutive blocks in this downtown area to be set aside for parking space or possible large commercial establishments, the former controlled by the city itself.

The exhibition describes by means of maps, models and drawings the development of shopping centers proposed for Granite City and also proposes certain boundaries of the industrial areas.

It must be remembered that whatever realizations of these proposed zoning and commercial developments are evolved will be the result of the **fullest cooperation between the citizens, the industries and the civic government** of Granite City.

WARREN M. JOLLEY

Photographs of the Granite City Re-Planning Exhibition comprising this presentation are by Charles Lorenz and Charles Trefts. The students enjoyed the assistance of the entire faculty of the School of Architecture, including Prof. Lawrence Hill, Chairman of the Department, and Professors Austin E. Fitch, Eugene Mackey, Paul Valenti, and Joseph D. Murphy; and Erwin Schmidt and Carl Thye. The housing models are by Susan Sallee, Graduate Student, who made them for her graduate thesis on housing.

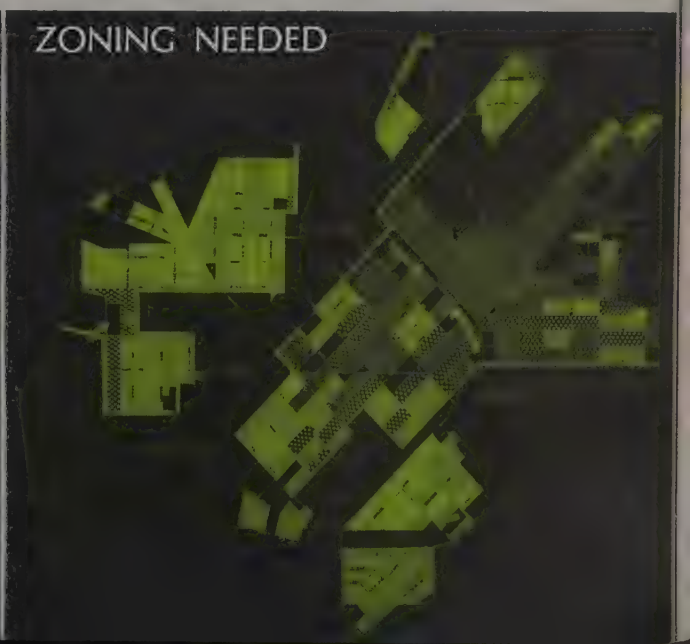
USHA PROJECT CONSTRUCTED

The problem of housing in Granite City is that not only is there a need for replacing and rehabilitating present houses of substandard condition in many parts of the city —particularly in the area southeast of the Granite City Steel Works and in the area to the northwest of the American Steel Foundry—but there is the further **urgent need of 2,000 new houses to maintain the normal population.**

It is in these areas, designated as substandard, where conditions exist such as four families living in one small house, meager sanitary facilities or none at all, and a lack of sufficient light, air, or space for healthful living. Our proposals attempt to alleviate the present bad conditions and to add new districts which are well-planned.

As logical growth and expansion of the Granite City Steel Works takes place, it is

SINGLE FAMILY AREAS



ZONING NEEDED

felt that the area to the southeast of the present plant and following through to the Company's area along the old Eastern Belt Line Railroad will be a natural area into which the Company will move, so that district with its very poor living facilities has been zoned for industry. Adjacent to this area and on the other side of the old Belt Line Railroad, on whose bed we propose a city arterial highway leading to the Edwardsville Road to the south and the new Belt Line Highway to the north, we developed a large housing project on vacant lands between 23rd, Nameoki Road, Edwardsville Road, and the city highway previously mentioned. It is considered that from this area industries in any part of the city are easily accessible. The cost of the two and three bedroom houses, efficiently planned and including the lots, would range from $3500 to $5000. This neighborhood is further planned within itself, so that the majority of industry to the west is screened by a large park, and access to the park and schools by children is safely accomplished by the use of paths through the center of the project with a minimum number of streets to cross.

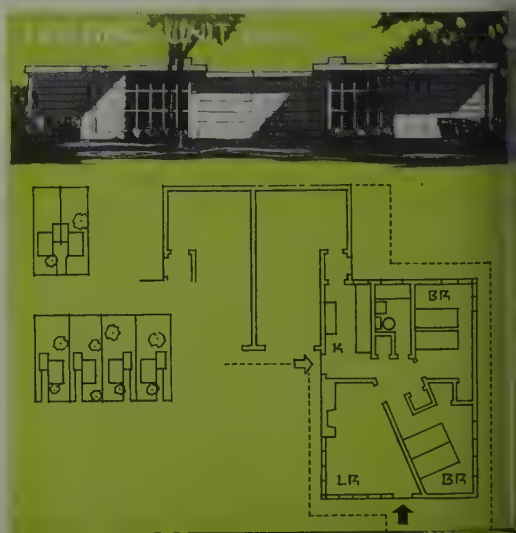
Four blocks to the north and bordering Nameoki Avenue to the west is another well planned housing area of the row-house or apartment type (10 to 12 families in one unit) where a minimum rent is possible, providing living facilities for families in the low-income brackets. The project is ideally located with regard to a business district directly to its south, and has ample playground areas within its boundaries for the children.

Mapped around the northeast corner of Wilson Park is a proposal to aid the new growth of $10,000 to $15,000 homes, and it is here that full advantage may be taken of the opportunities offered with more extensive and elaborate planning. The fineness of well-organized houses enhanced by beautiful landscaping cannot be overlooked.

Across the tracks to the northwest, bounded by the new belt line highway, Rock Road and 22nd Street, the final housing proposal was made. It is situated at the edge of a sub-standard neighborhood, a small portion of that neighborhood being encompassed by the new development, and the project is composed of row-house units of 10 families each, arranged in a convenient and interesting manner. Congestion in these areas will be removed and decent living for all provided.

It was considered impractical from the economical point of view to attempt the demolition of all existing sub-standard areas and the erection of new houses, but some rehabilitation work must be done for it should be remembered that **the new housing projects provide only those living facilities for the 2000 families now either without homes, or living with other families.**

The over-all approach to Housing in Granite City was primarily a practical one in which existing conditions, possibilities of future trends, and even political influences were considered, and recognition was given to each according to the measured relative value. Keeping practicability ever in mind, we have, however, attempted to engender a spirit of progressiveness and imaginativeness into every problem as it was studied in detail and we feel that it is only in this manner the New Granite City of the future can successfully be achieved. ALLAN WALTER

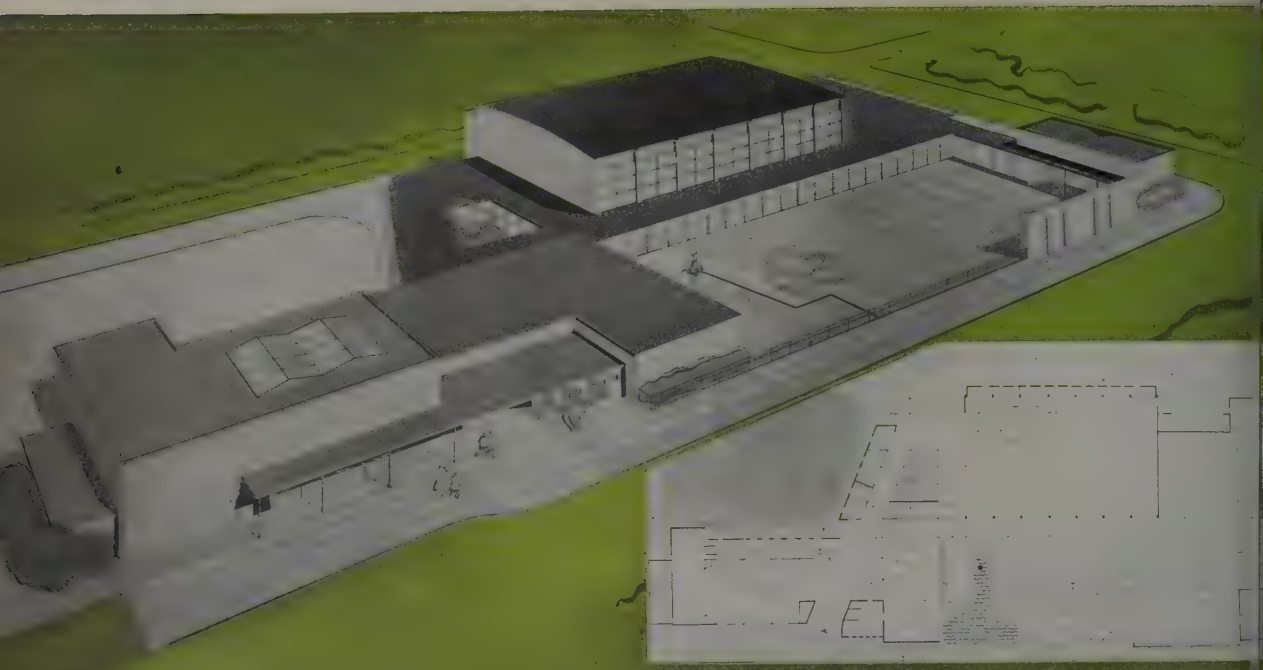


The problems undertaken by the student committee on Civic Work were parks, play grounds, schools, recreation centers, and the civic center.

The most urgent need seemed to this committee to be more room for play and recreation. According to good practice as proposed by the Illinois State Planning Commission, **an adequate park should be within a half-mile radius of the homes it serves.** In order to meet this requirement, two other parks the size of Wilson Park and several play areas for small children are needed, and have been provided and well located on the plans. One of the new parks is in the residential area west of the railroad tracks and one in the newly-planned area on the east side of town.

The close cooperation of this committee with the other three: traffic, commerce, and housing made possible a plan in which **parks and other recreational facilities are well-integrated** for the convenience, health and welfare of Granite City.

A large recreation center, comprising skating rink, bowling alleys, handball courts,



RECREATION CENTER

many other indoor and outdoor games, and a restaurant, is centrally located.

A Civic Center was ingeniously designed without sacrificing any of the present civic buildings. A Civic Park was created between Edison and Delmar and Niedringhaus and 21st Streets. Twentieth Street, behind the Post-Office, was closed and this area made part of the park. With the demolition of only a few buildings, a fine park was possible. This not only affords open space and parking space for the convenience of the people of Granite City, but also creates a dignified setting for the buildings about this area, such as the City Hall, Post Office, Y.M.C.A., Library, church, and school.

With the expansion of housing, new schools would be needed, and these have been located near to or within the parks and within easy walking distance of every home.

Access from homes to schools and to shopping centers without any street crossings is provided in most of the new housing areas proposed. Since the welfare of America depends upon good play, recreation, and educational facilities, only the best should be provided. ROBERT LEE FISCHER

FIRE STATION

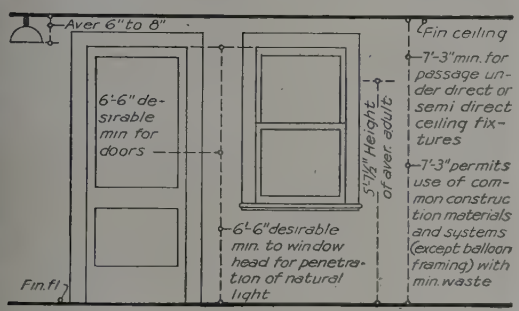
CIVILIAN AERONAUTICS SCH

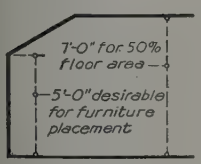
DATA SHEETS
By Don Graf

MINIMUM CEILING HEIGHTS FOR HOUSES AND HOUSING

Index No. **D 20 s** PLANNING

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF





CEILING HEIGHT FOR ATTIC ROOM

MINIMUM CEILING HEIGHTS HOUSING AGENCY REQUIREMENTS

Agency	*Ceiling Height*
USHA	7'-10"
Defense Housing Com.	7'-10"
FSA, U. S. Dept. of Agriculture (tentative)	7'-4"
PBA (not fixed, but used)	8'-1"

FHA: Requirements vary according to local office. Tabulation shows number of offices per region requiring heights listed. Bold face indicates most common.

REGION	8'-0"	7'-6"	7'-0"
Northeastern states	3	*9*	5
Southern states	*11*	8	0
Midwestern states	1	*10*	5
Western states	1	9	1

HEIGHTS REQUIRED BY CONSTRUCTION
to avoid waste of building materials

Wall Construction	Ceiling Height[1]
MASONRY—	
Brick[2]	
40 courses	8'- 1 13/16"
39 courses	7'-11 1/16"
38 courses	7'- 8 5/16"
37 courses	7'- 5 9/16"
36 courses	7'- 2 13/16"
35 courses	7'- 0 1/16"
34 courses	6'- 9 5/16"
Concrete Block[3]	
14 courses	8'- 3 13/16"
13 courses	7'- 7 13/16"
12 courses	6'-11 13/16"
FRAME—	
Western Platform	
8'-0" studs	8'- 3 23/32"
7'-0" studs	7'- 3 23/32"
Balloon	
18'-0" studs	8'- 1 7/16"
16'-0" studs	7'- 1 7/16"

1—Finish floor to finish ceiling, joists assumed 9 5/8", flooring double, both finish and subflooring 25/32" thick, plaster on ceiling 1" thick.

2—Brick assumed 2¼" x 3¾" x 8" with ½" joints.

3—Concrete block assumed 7¾" high with ¼" joints.

SET 22 SEP 1942

MINIMUM WINDOW AREAS FOR HOUSES AND HOUSING

Index No. **D 20 t** PLANNING

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

Suggested minimum window areas contained herein are based on natural illumination requirements as determined by data on average daylight illumination and brightness of the sky for different regions of the United States. The Committee on the Hygiene of Housing of the American Public Health Association recommends a minimum of 6 footcandles of natural light. This necessitates, at Washington, D.C. (lat. 39°) a ratio (glass to floor area) of 15 per cent, or 1:6.7, if walls and ceiling are light in color. However, since exacting eye work can usually be moved close to windows in residences, it seems reasonable to relax this standard. U. S. Public Health and Weather Bureau reports show that Plains states average 25 per cent higher, Western mountain states 46 per cent higher, than Northeastern states in daylight illumination. To facilitate adapting the table to local conditions, governing physical conditions for each region are listed.

MINIMUM RATIO — WINDOW AREA TO FLOOR AREA

Region		I Northeastern States	II Southeastern States	III Northwestern States	IV Southwestern States
Physical Condition	Latitude	high	low	high	low
	Altitude	low	low	high	high
	Air Pollution	high	moderate	low	low
Desirable Ratio Window Area to Floor Area		1:7	1:8	1:8	1:10
Minimum Openable Area Per Window		1/3	1/2	1/3	1/2

SPECIAL CASES

Location	Min. Ratio Glass to Floor Area
Bathroom and water closet compartments	1:8 (not less than 3 sq. ft.)
Kitchen	1:8 (not less than 9 sq. ft.)
Basement and Cellar	1:40
Stairways in multiple family buildings (more than 2 stories)	12 sq. ft. minimum per story height
Hallways in multiple family buildings	1:20

CURRENT PRACTICE

American Standards Association (tentative)	1:8
National Board of Fire Underwriters	1:10
Uniform Building Code (Pacific Coast)	1:8
U. S. H. A. — F. H. A. — P. B. A.	1:10
Michigan State Housing	1:8
New York, N. Y. — Washington, D. C. — Chicago, Ill.	1:10
Boston, Mass. — Miami, Fla.	1:8

ANDERSON RANCH

CARL F. GROMME, ARCHITECT

LIVING COMFORT is the keynote of the Sonoma County ranch buildings designed for Mr. and Mrs. Berrien P. Anderson by Carl F. Gromme, of San Rafael, California. The view (above) in the Living Room, key unit of the indoor-outdoor living area, indicates the restrained simplicity of structure, finish, and decoration. Furnishings are unpretentious. Walls and ceilings are finished with Douglas fir or sugar pine shiplap, painted white except in the Living Room, which is stained a weathered gray. The wide windows dramatize the view from this superb building site (see photographs on following pages). Outside the Living Room, also serving as a connecting passage to the Guest House is the Paved Porch (photograph below) that gives to this simple home its distinctive character. The porch offers a natural, easy transition to the terrace and lawns adjacent to the house. (Photographs of the ranch buildings were made by Esther Born, of San Francisco)

THOMAS D CHURCH
LANDSCAPE ARCHITECT

ANCH BUILDINGS FOR MR. & MRS. BERRIEN P. ANDERSON
SONOMA COUNTY
CARL F. GROMME ARCHITECT SAN RAFAEL

The Ranch House commands an unbroken view of the Valley Of The Moon (see plot plan over-page) that is well-suggested by the photograph below, looking past the Caretaker's House, Stables, and Corrals

The necessary ranch buildings were thoughtfully-designed by Gromme to compose as a pleasing, unaffected group on the slope below the Ranch House. The Horse Barn and Cow Feed Shed are shown below

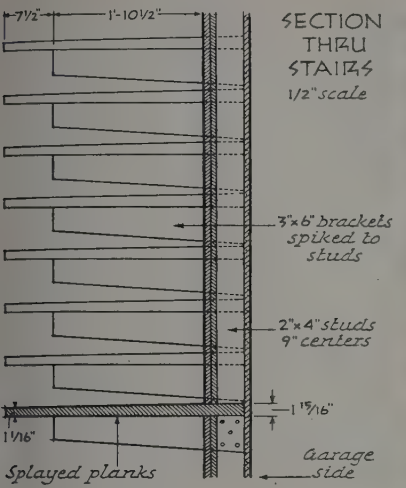
In a circle of trees to the north of the Ranch House is the swimming pool designed by Thomas D. Church, with its sun terrace paved with brick and tree sections. The circular steps of the smaller terrace just behind the Ranch House (photo below) are Glen Ellen stone, quarried in the neighborhood. The Ranch House is roofed with "shakes" of red cedar. The stone steps lead down to the paved breeze-way shown in both photographs on facing page, one of the most attractive features

Generous provision was made by the Andersons for extending the traditional hospitality of the California Ranch. Connected to the Ranch House (right, above) with its three bedrooms for the family, is a Guest House (left, above) with two double bedrooms and a larger bunk room, all finished with characteristic simplicity. The view across the Valley Of The Moon seen through the breeze-way (photograph below) dictated the location of the Ranch House on its hillside site. Steps in the sloping lawn are tree sections

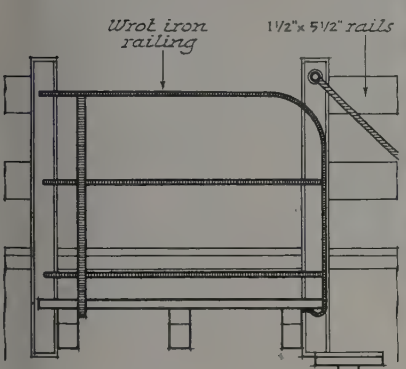
Near the hillside spring is the Barbecue area, also designed by Thomas D. Church, Landscape Architect, of San Francisco. The location is convenient to both Ranch House and Swimming Pool. (See plot plan)

MATERIALS AND EQUIPMENT

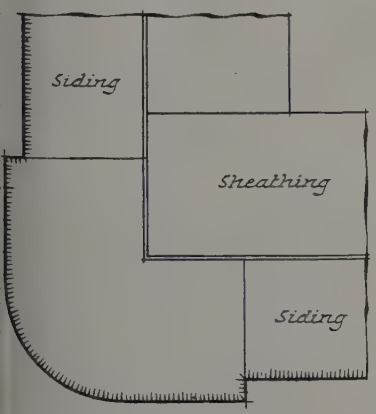
Footings	REINFORCED CONCRETE
Foundation Walls	REINFORCED CONCRETE
Terraces	STONE (quarried close by)
Waterproofing	Integral in concrete floor slabs
Wall Insulation	Loose fill type, 4″ thick
Wall Construction	2″ x 4″, 2″ x 6″, and 2″ x 8″ studs
Floor Construction	CONCRETE SLAB on grade; WOOD FLOOR on redwood sleepers
Roof	Shakes of red cedar
Roof Insulation	Reflective, double
Floor Insulation	Reflective, single
Sheet Metal	Galvanized iron
Windows	WOOD SASH CASEMENT for the most part; Rolltype Screens
Floors (Finished)	OAK, 5/16″ thick T & G fir subfloor (Main House); otherwise, FIR floors, 1″ x 4″ T & G
Interior Walls	DOUGLAS FIR or SUGAR PINE (shiplapped)
Ceilings	DOUGLAS FIR or SUGAR PINE (shiplapped)
Plumbing	Enameled iron fixtures; cast iron drainage; steel pipe (Supply)
Heating	ELECTRIC
Other Equipment	Dishwasher, electric range, electric hot water heaters
Hardware	Hand wrought BLACK IRON
Electric Wiring	Knob and tube and BX. Underground wiring in conduit
Painting	Woodwork painted white throughout except large living room which is stained a weathered gray



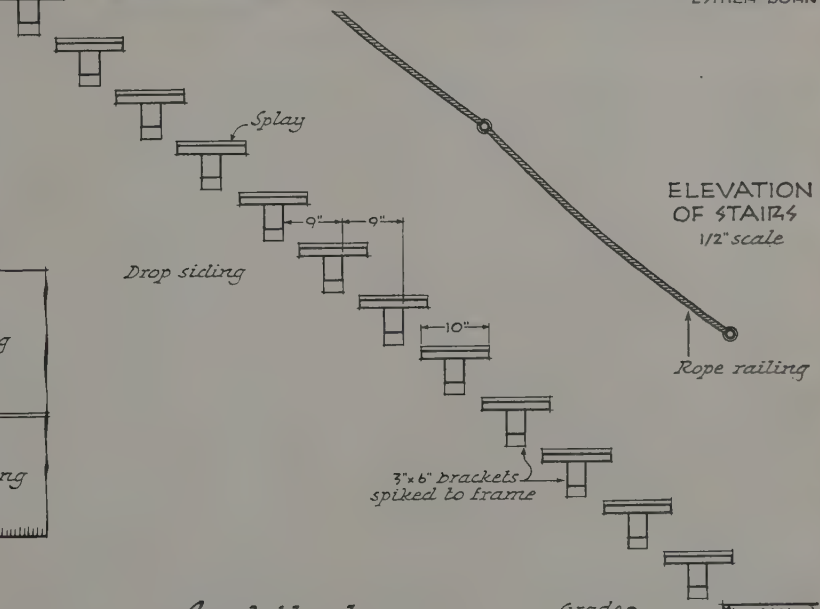
SECTION THRU STAIRS
1/2" scale



ESTHER BORN



PLAN AT CORNER
Full size



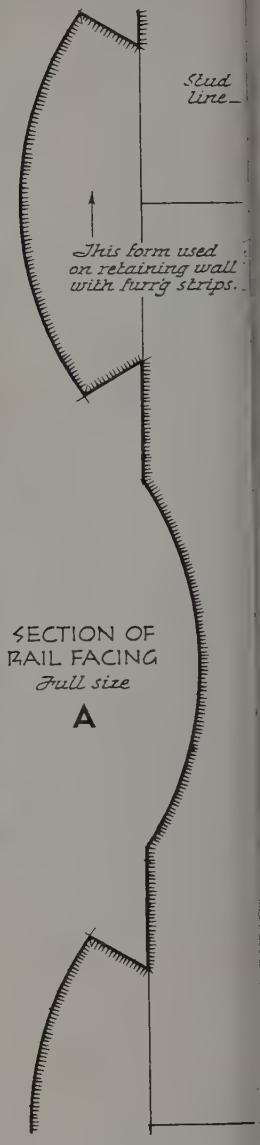
ELEVATION OF STAIRS
1/2" scale

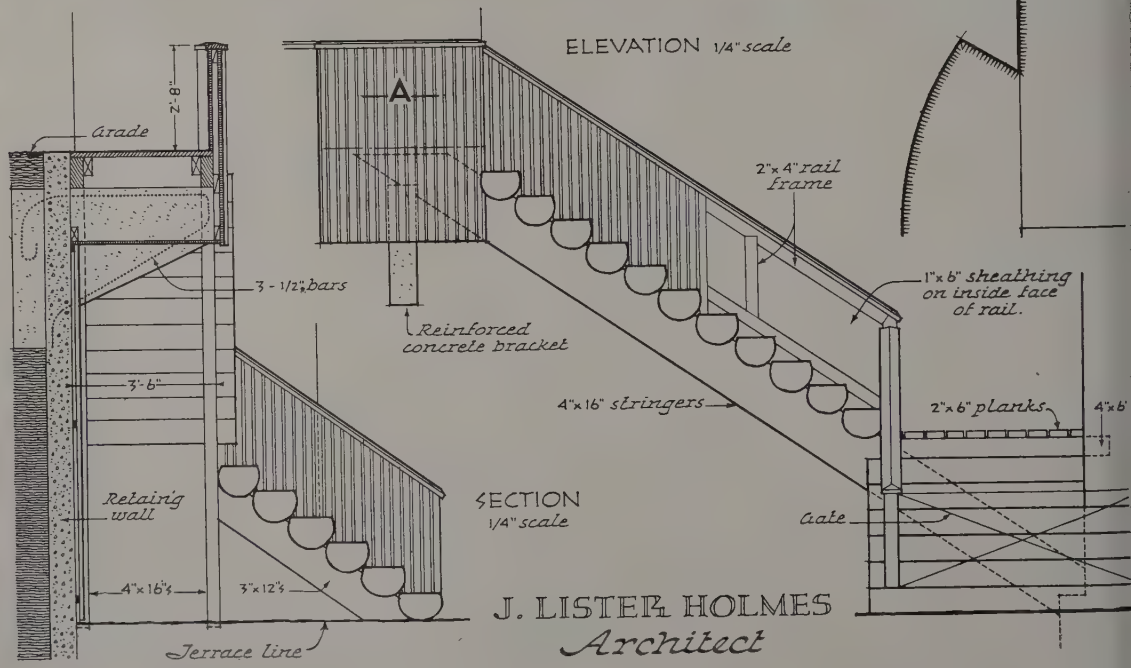
Rope railing

ROI L. MORIN . . . . . Architect

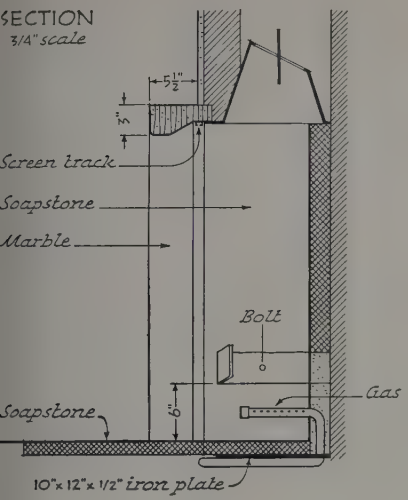
EXTERIOR STAIR

RICHARD GARRISON

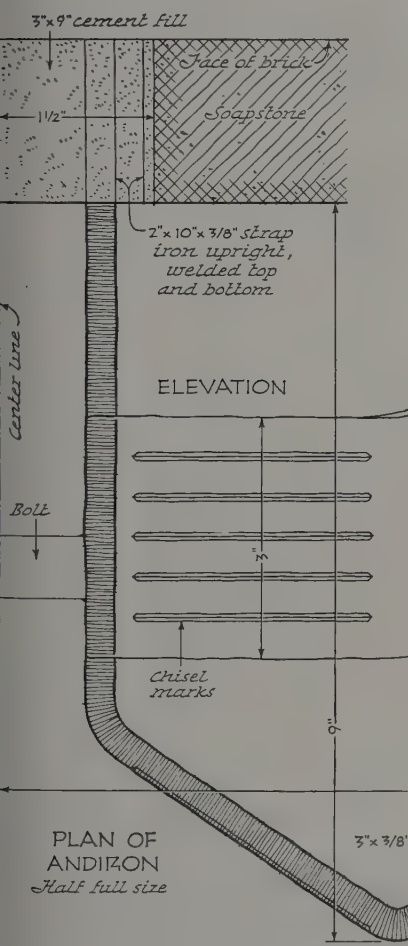


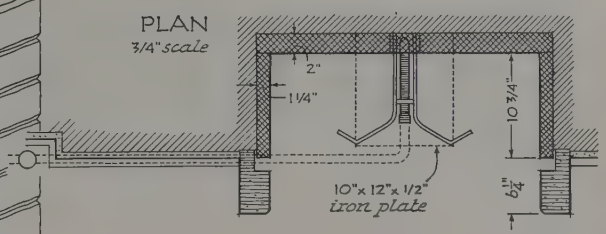


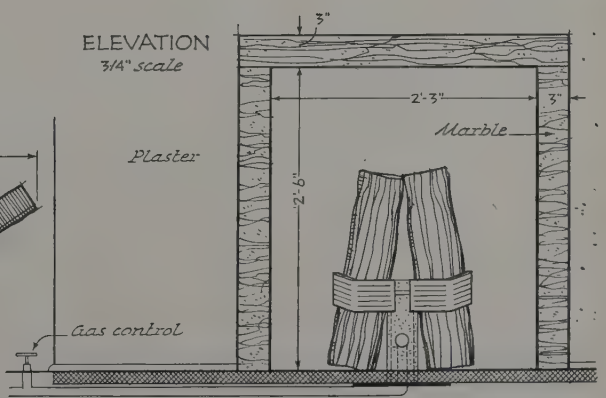
J. LISTER HOLMES
Architect



RICHARD GARRISON







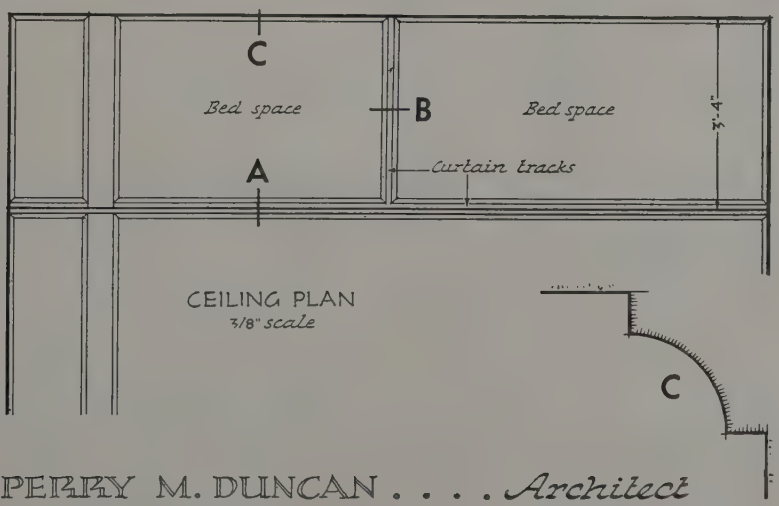
GEORGE KOSMAK
Architect

FIREPLACE

RICHARD GARRISON

ALBERT HARKNESS
Architect

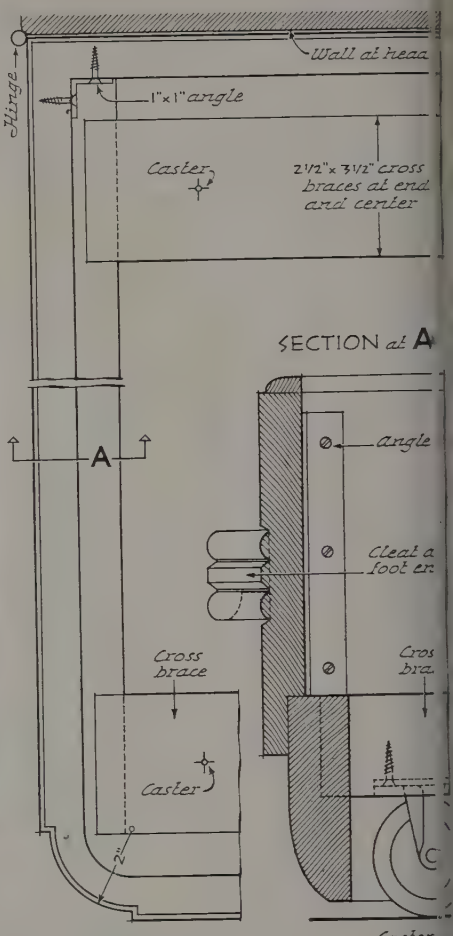
GEORGE H VAN ANDA



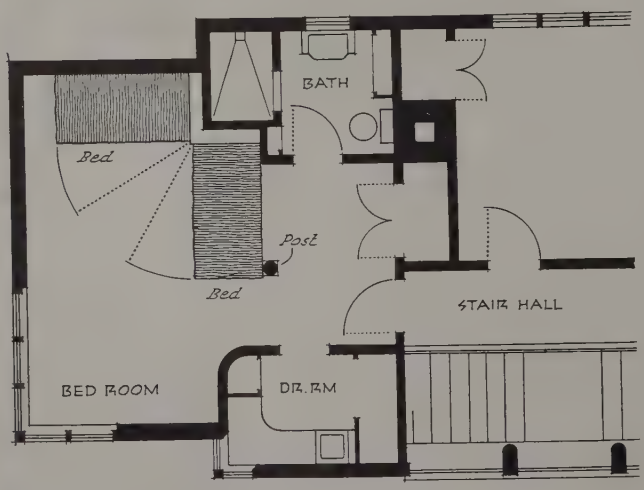
PERRY M. DUNCAN . . . . *Architect*

BED ALCOVE

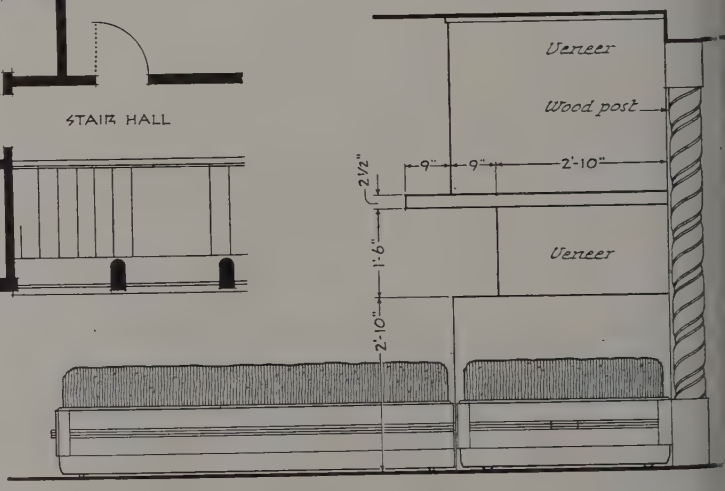
RICHARD GARRISON



PLAN OF BED
3" scale



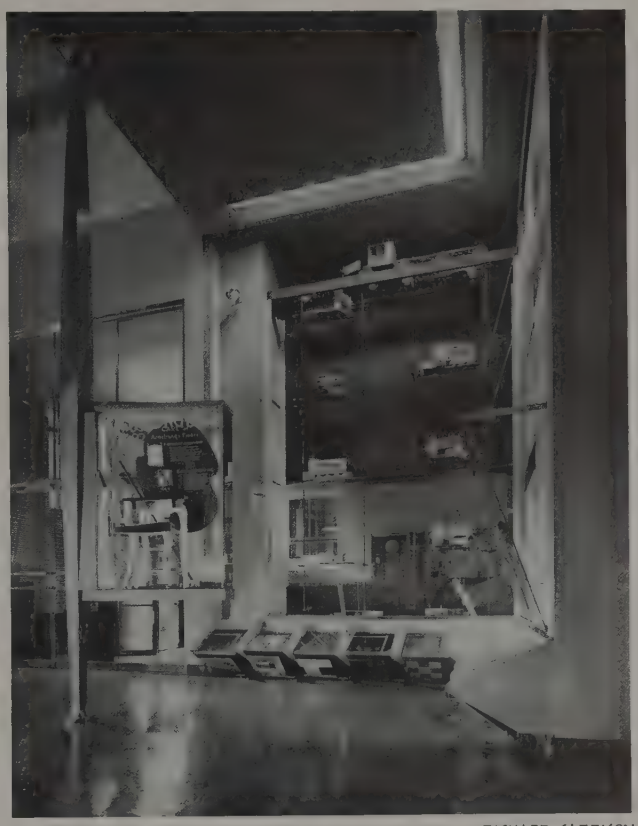
PLAN OF SUITE 1/8" scale



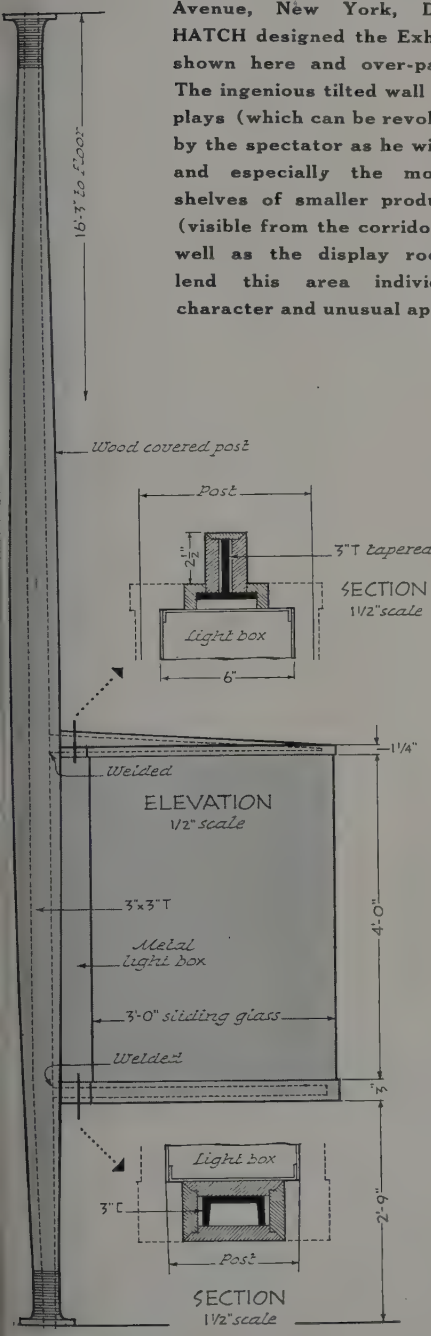
J. LISTER HOLMES
Architect

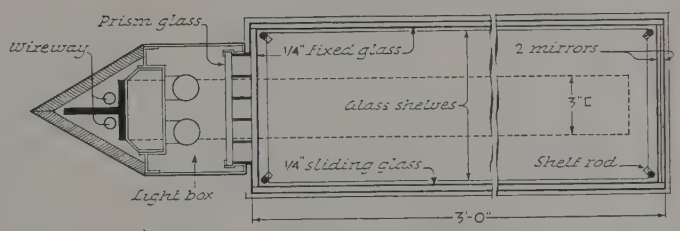
By Don Hatch

For a corner of the Architects Samples Corporation display room at 101 Park Avenue, New York, DON HATCH designed the Exhibit shown here and over-page. The ingenious tilted wall displays (which can be revolved by the spectator as he wills) and especially the mobile shelves of smaller products (visible from the corridor as well as the display room) lend this area individual character and unusual appeal

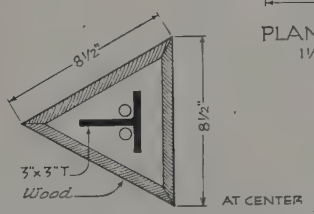


RICHARD GARRISON

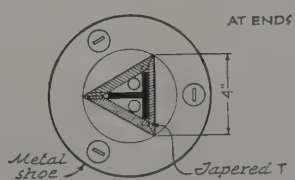


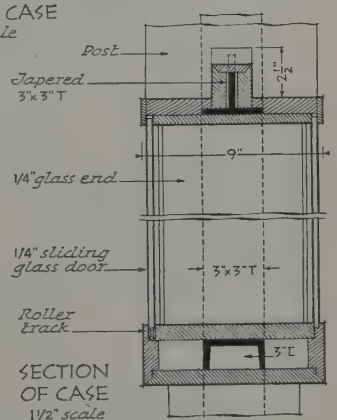


PLAN OF CASE
1½" scale



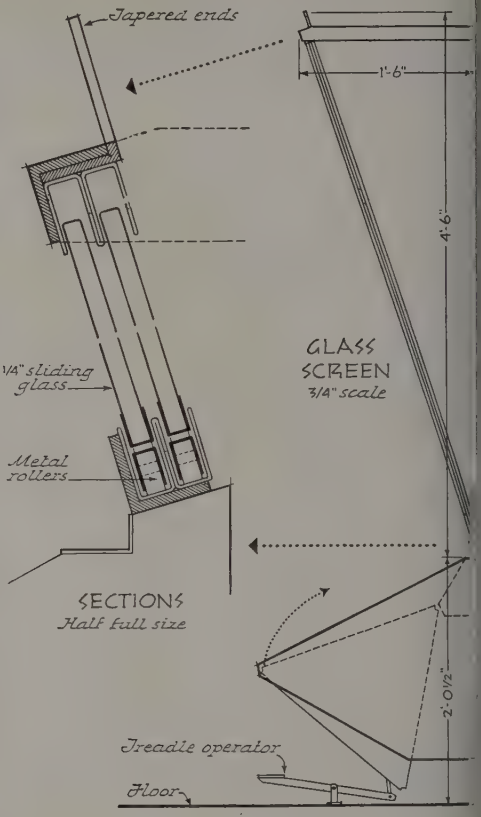
PLAN OF POST 1½" scale



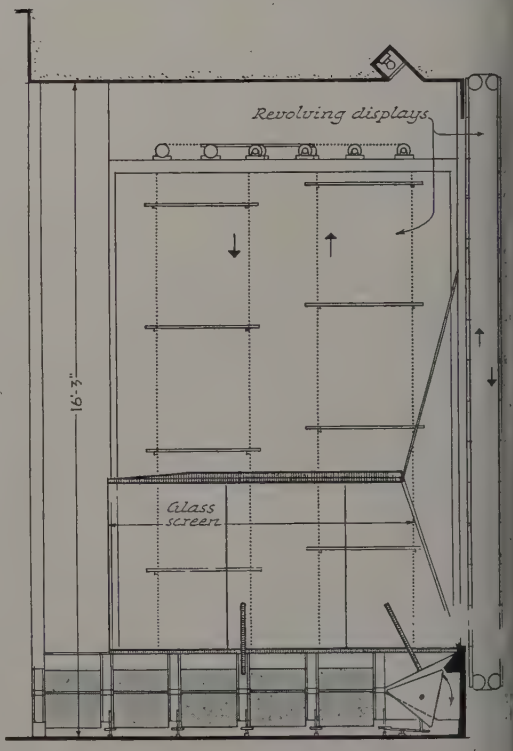


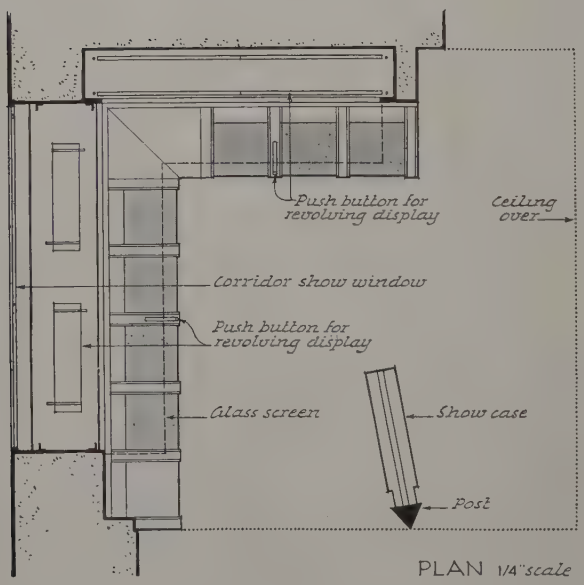
SECTION OF CASE
1½" scale

RICHARD GARRISON

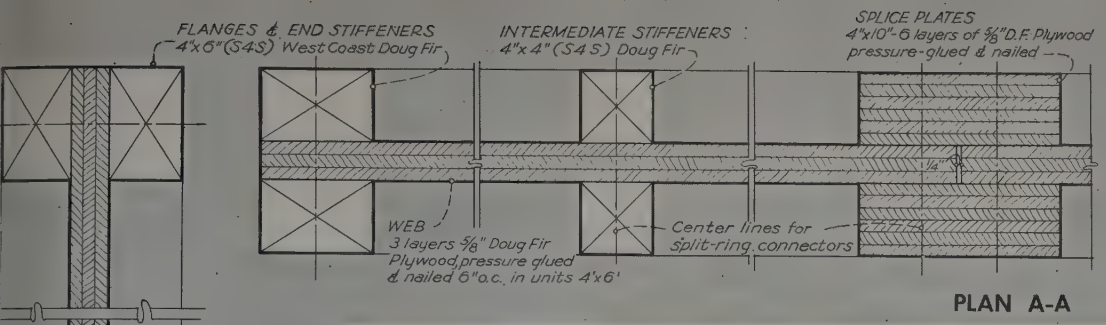


SECTION
1/4" scale





PLAN 1/4" scale



PLAN A-A

SECTION B-B

PLYWOOD SATISFACTORY FOR HEAVY-DUTY GIRDERS

by C. W. MUHLENBRUCH
Assistant Professor, Civil Engineering
Carnegie Institute of Technology

Modern methods of fabricating timber structures have led to the use of large wood units designed for moderately heavy loading. In general, these have been restricted to truss construction—although comparatively long span roof girders, designed for light loads, have been used successfully. The present wartime shortage of metals has forced the substitution of wood and plywood for steel and aluminum.

Designers, however, have been handicapped by lack of knowledge of the general properties of plywood, and by a dearth of test results for full-sized sections. Substitute uses of wood have been confined to rather light-duty trusses, girders, and paneling.

Tests recently conducted in the Materials Testing Laboratory of the Carnegie Institute of Technology on an 18 ft. girder designed for highway loads show that this type of construction may be utilized for heavy duty loading. Physical properties of the materials used have also been determined.

The girder was designed for the H-15 live load[1] of the American Association of State Highway Officials and a dead load of 600 lbs. per lineal foot of girder. One-half the H-15 live load was assumed to act on one girder. Also, it was assumed that the web and splices would take shear but no moment. The following design stresses were used:

Shear perpendicular to face plies of plywood .....240 psi
Douglas Fir in tension or compression .....2000 psi
Load on connector ring in lbs. per ring .....1960[2]

Figure 1 gives the construction details of the girder. As shown in this figure the web was constructed of three 6 x 4 ft. sections and spliced at the third points. Each section was made up of three layers of 5/8-in.-thick, 6 x 4 foot Douglas Fir plywood panels, glued together with a water-soluble "waterproof" type of glue under a pressure of 150 lbs. per sq. ft., and nailed 6 in. on centers.

The flanges and end bearing stiffeners were made of 4 x 6 in. (S4S) West Coast Douglas Fir. Intermediate stiffeners of 4 x 4 in. (S4S) Douglas Fir were placed at the midpoint of each panel. Splice plates 4 x 10 in. were made up of six layers of plywood pressure-glued together.

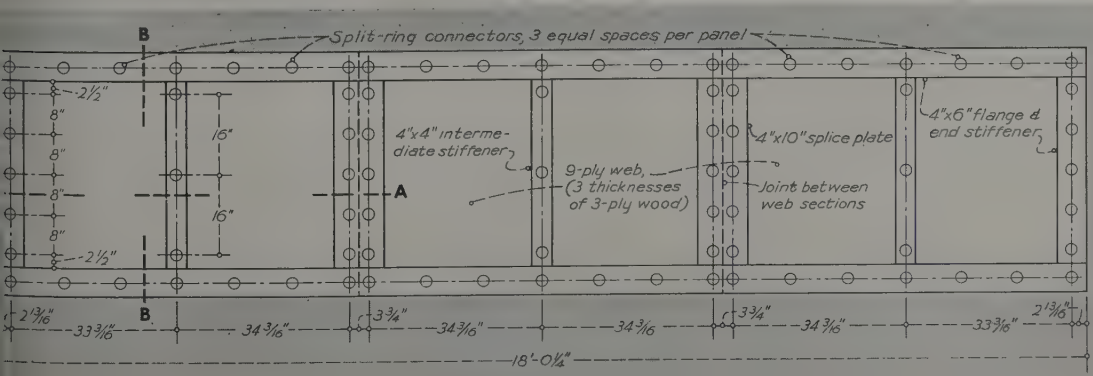
All connections were made with Teco 2½ in. split ring connectors using ½ in. bolts 10 in. long. A minimum edge distance of 2½ in. was used for the connector rings. Each part of the girder was individually laid out, drilled and grooved, and finished to exact length and driven into place. All material was structurally sound and free from defects.

The primary purpose of the tests was to investigate the efficiency of the design by determining the flange stresses, web buckling stresses, stiffener stresses, and transfer of stress from the web to the flanges. This was accomplished by means of 177 gage lines located on both sides of the girder (shown in Figure 5) and a 10 inch Whittemore strain-gage. The gage holes were drilled in surveyor's tacks which had been driven into the

[1] H-15 live load is for truck-train loading; in the condition selected as a design basis, a 15-ton (gross weight) truck produced maximum moment of 12,000 lb. at midspan; to this was added 600 lb. per lin. ft. dead load; total, 12,600 lb.

[2] Although this is the minimum value for load at 90° to grain, it was used due to uncertainty of which ply would govern the ring's action in plywood.)

FIG. 1. Construction of the plywood girder tested at Carnegie Institute (details appear at top of page.) Web was pressure-glued with waterproof glue and nailed on 6-inch centers over its entire surface



ELEVATION

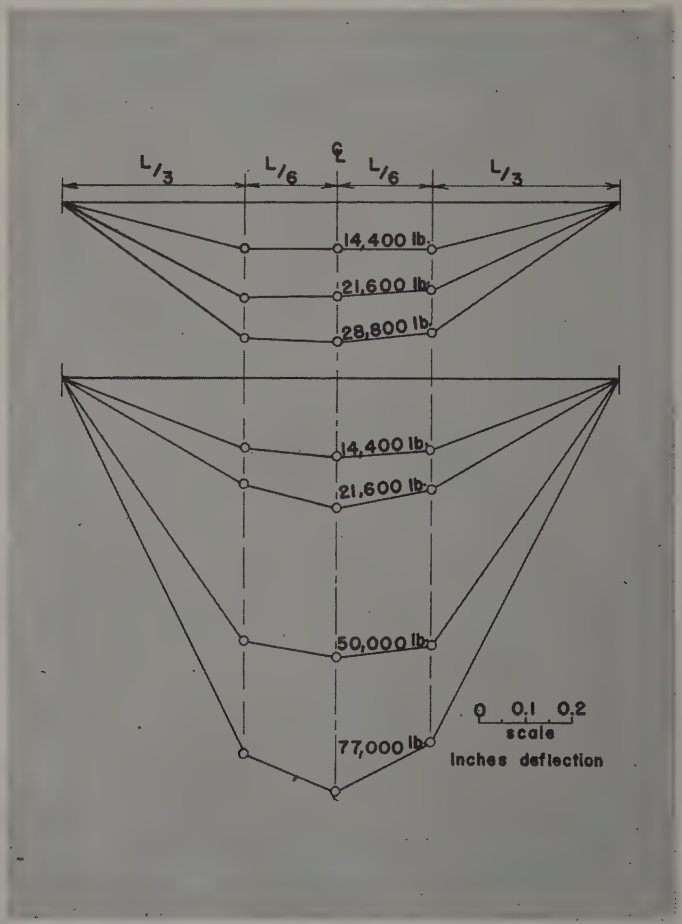


FIG. 3. (Above) Plywood girder in testing machine ready for center-point loading

FIG. 4. (Left) Deflections under third-point loading at top, center-point loading at bottom

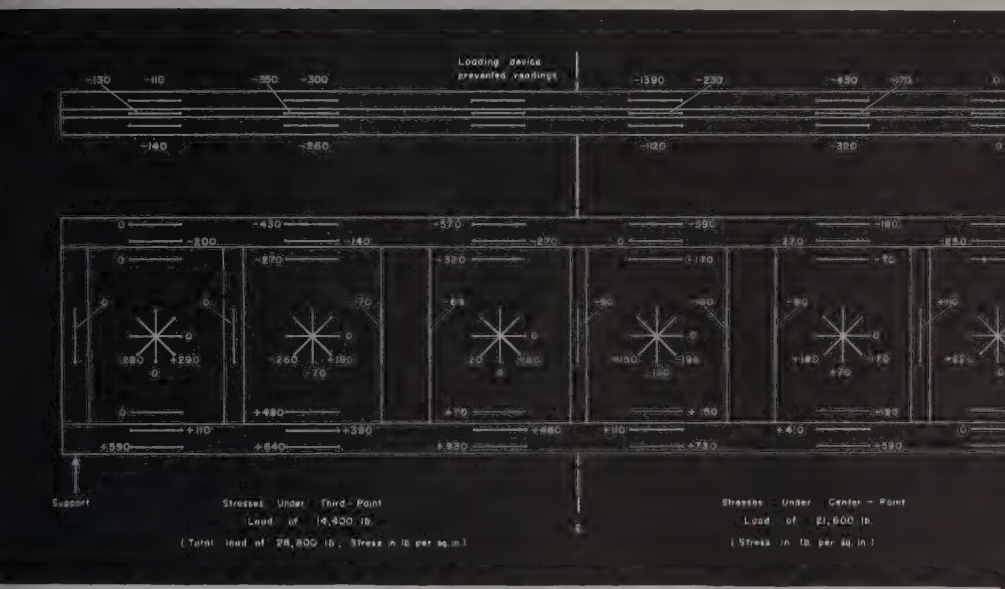
girder at the proper points. To study the results of the strain-gage readings the physical properties given in Table I were determined experimentally.

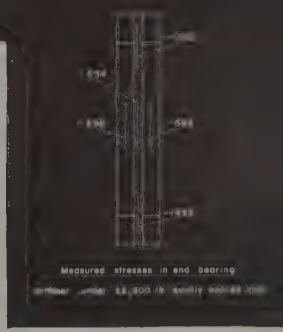
Loads were applied to the end bearing stiffener, the third-points, and the center point, the latter being carried to failure. For the end bearing stiffener test, load was applied through a spherically seated head, 10 inches in diameter, bearing against a ½-in. thick steel plate which covered the top flange immediately over the stiffener.

A length of 8 inches of the lower flange was supported on a similar plate. Shims ¼ in. thick were placed between these plates and the web. Figure 2 shows the results of this test for a load of 22,500 lbs. The strain gage readings indicate that the web took most of the load. The gage lines at the center of the end panel showed no stress except in the vertical direction where a compressive stress of 100 psi was measured.

Figure 3 shows the completed girder as set up in the testing machine. For the third-point loading condition, a total load of 28,800 lbs. was applied at the third-points of the top flange through 1-inch rollers resting on steel plates. Each end of the girder was placed on heavy steel plates set on

FIG. 5. Diagram showing gage lines on which stresses were measured, and stresses recorded at the design load. FIG. 2, below, right, stresses in end stiffener under 22,500 lb. load, axially applied





rocker type supports and no lateral bracing was used. The end bearing area was 75 square inches for each support. Measured deflections for this loading condition are shown in Figure 4. The deflection pattern shows that the splices lack rigidity, permitting the girder to deflect as three separate parts. Thus, the deflection at the center line, which is at the center of the intermediate panel, and the deflections at the third points are approximately the same. Representative measured stresses are shown in a portion of Figure 5. A study of this figure shows that, in general, there is integral action between the component parts of the girder. All of the parts are under-stressed, particularly the splice plates, indicating that they could safely be reduced in size without surpassing design stresses.

For the center-point loading test, load was applied through a steel plate bearing on the top flange and having 50 square inches of bearing area. The same end condition was used as for the third-point test and no lateral bracing was employed. Deflections measured under the center-point loading are shown in Figure 4. Within the design range of 21,600 lbs., the deflection pattern was much the same as that obtained under the third-point loading with slightly more deflection at the center line.

Even with this condition, the girder deflected as three separate units, again indicating lack of rigidity in the splice plates. Stresses measured for the 21,600-lb. center-point load are shown

TABLE I — EXPERIMENTAL VALUES FOR DOUGLAS FIR AND PLYWOOD

Each value represents the average of two specimens, each made of three thicknesses of Douglas Fir plywood and glued in the same way as the girder web.

Material	Modulus of elasticity, psi		Proportional elastic limit, psi	
	Tension	Compression	Tension	Compression
Douglas Fir	2,860,000	2,280,000	5,600	4,300
Plywood* with face grain	1,100,000	1,460,000	1,000	2,300
Plywood perpendicular to face grain	780,000	1,100,000	1,000	1,400
Plywood at 45° to face grain	280,000	225,000	600	850

*All plywood of Douglas Fir

TABLE II — MEASURED AND CORRECTED CENTER-LINE DEFLECTIONS

THIRD-POINT LOADING

Load, pounds	Measured deflection, in.	Corrected deflection, in.
14,400	0.102	0.032
21,600	0.200	0.095
28,800	0.300	0.160

CENTER-POINT LOADING

Load, pounds	Measured deflection, in.	Corrected deflection, in.
14,400	0.172	0.102
21,600	0.280	0.175
50,000	0.600	0.356
77,000	0.891	0.516

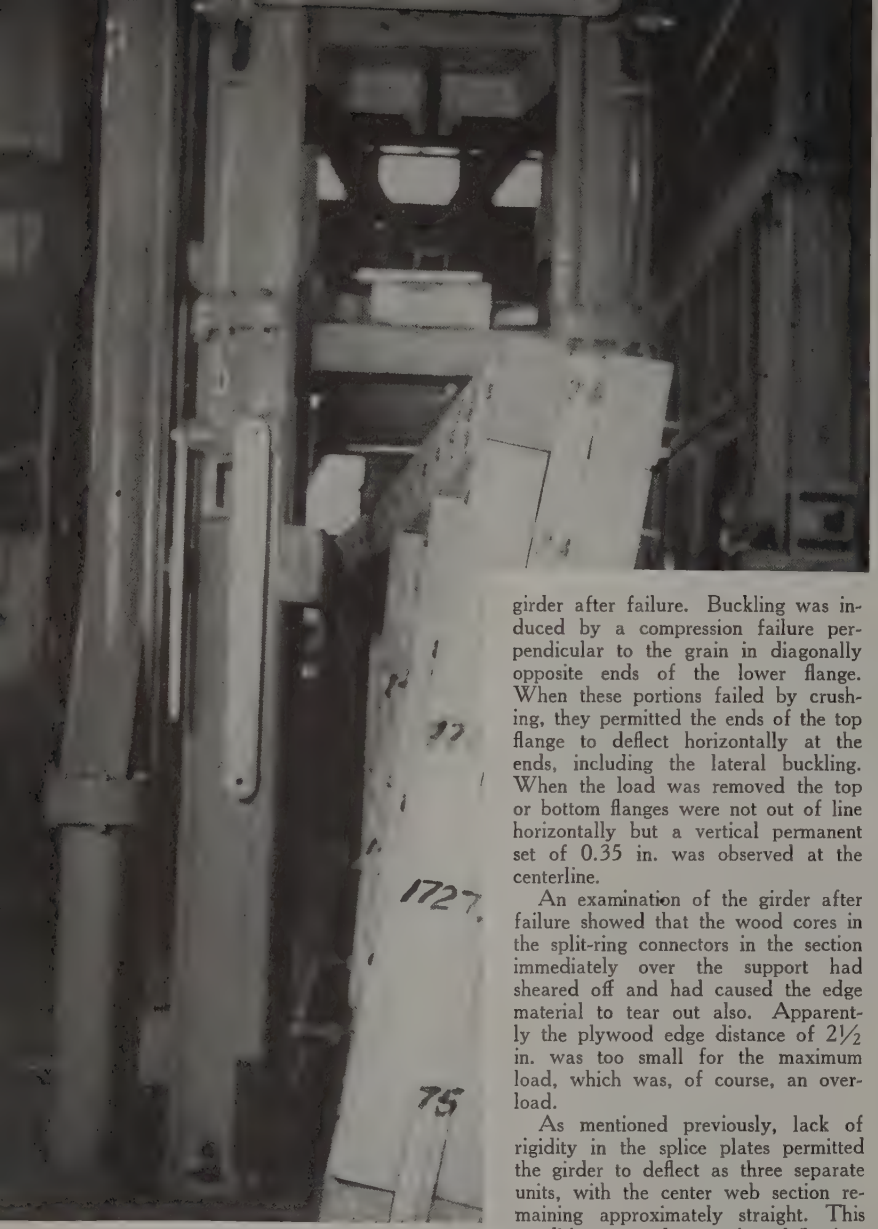


FIG. 6. Plywood girder failed by buckling laterally under a load of 110,580 lb.—many times the design loading

ACKNOWLEDGMENT: The author acknowledges the valuable work of J. T. O'Brien and A. J. Karpinski, former students of Carnegie Tech, who carried out these tests in conjunction with their theses under the author's supervision; also advice from Prof. F. J. Evans in selecting design. The following organizations cooperated: Douglas Fir Plywood Association; Hal Keely Plywood Co. (Pittsburgh); Timber Engineering Co.; West Coast Lumbermen's Association.

in a portion of Figure 5. Again, integral action is apparent although most of the members are understressed. Under a load of 50,000 lbs., a few gage lines were read and a maximum stress of 530 psi was observed at the tensile 45° line in the panel to the right of the center-line. Both the compressive and tensile diagonal stresses in all of the panels were equal to this value for the 50,000 lb. load. The maximum vertical stress in the web immediately over the supports was 1450 lbs.

Under a load of 77,000 lbs. the ¼ inch construction gap between the web sections had closed at the top. The girder failed by lateral buckling at a load of 110,580 lbs. The center-line deflection was 2¾ inches.

Figure 6 is an end view of the girder after failure. Buckling was induced by a compression failure perpendicular to the grain in diagonally opposite ends of the lower flange. When these portions failed by crushing, they permitted the ends of the top flange to deflect horizontally at the ends, including the lateral buckling. When the load was removed the top or bottom flanges were not out of line horizontally but a vertical permanent set of 0.35 in. was observed at the centerline.

An examination of the girder after failure showed that the wood cores in the split-ring connectors in the section immediately over the support had sheared off and had caused the edge material to tear out also. Apparently the plywood edge distance of 2½ in. was too small for the maximum load, which was, of course, an overload.

As mentioned previously, lack of rigidity in the splice plates permitted the girder to deflect as three separate units, with the center web section remaining approximately straight. This condition caused excessive deflection. An improved design could be secured using a continuous rather than a spliced web. Such panels are available and may be obtained in widths of 4 ft. and lengths of 30 ft. or more by some plywood distributors or they may be made up by local lumber mills. The necessary joints should be scarfed and glued in a press, using a resin or glue suitable for the exposure conditions anticipated.

With such a continuous web in mind, correction has been made for the splice rotation. The measured deflections have been corrected to obtain values approximating those which might be encountered using a continuous web. To make this correction, the web sections were assumed to rotate about an imaginary pin at the center of the splice. The ¼-inch movement of the web sections under a load of 77,000 lbs. caused a joint rotation of 0°18′. For this angle of rotation, the deflection caused by lack of rigidity of the splice plates is 0.375 inch.

The deflections at the lower loads were assumed proportional to the 77,000 lb. load and corrected accordingly. Corrected deflections for third and center-point loading are given in Table II. It must be borne in mind that these values are approximate but they help to give an idea of the deflections which might be expected in a similar girder using a continuous web.

If a moment of inertia for the girder cross-section is calculated on the basis of the longitudinal plies alone, of which there are nine, and an average value of 940,000 psi for the modulus of elasticity of plywood is used, the calculated centerline deflection under the 50,000 lb. concentrated load is 0.355. This may be compared with the corrected value of 0.356 given in Table II. This value for modulus of elasticity is the average of the with-grain and cross-grain values given in Table I.

The following general conclusions may be drawn as a result of these tests:

1. The plywood web took moment in proportion to the number of longitudinal plies. A design made on this assumption would reduce the size of the flanges and web and permit a better utilization of the allowable working stresses.
2. Much of the deflection was caused by lack of rigidity in the splice plates. A girder made of a continuous panel might therefore be expected to deflect less.
3. An edge distance of at least 3 in. should be used for 2½ in. split-ring connectors in plywood.
4. Properly designed and constructed girders of plywood may be expected to resist heavy loads with reasonable deflections and satisfactory working stresses.

TECHNIQUE USED

estrained gray mood of this old English has been captured by Mr. Chamberlain HB, F and 2H *Typhonite* Eldorado s. The principal layout of the drawing nade with a 3B. Distant values were ed with a flat 5H. A coarse sketch (Canson and Mongolfier) was used.

"BLOODY, BUT UNBOWED . . ."

How the ghosts of former defenders of this old fortress, which has overlooked the English Channel since Norman times, must have cried out in protest when German bombs struck! This great historical and architectural work, battered, but undaunted, somehow symbolizes England's indomitable pride and courage. Dover Castle is here reconstructed by Samuel Chamberlain, Typhonite *Eldorado in hand. Another in a series brought to you by Pencil Sales Department 167-J9,*

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CHOOSING A NAME

More than 300 entries in the Name Contest conducted by THE NEW PENCIL POINTS were received last month—many of them just under the deadline on August 20. These will be inspected for eligibility under the rules announced in the June and August issues, then turned over to the Judges for consideration. The decision of the Jury will be announced in the October issue.

BATTERY PARK DESIGNS JUDGED

Although drawings submitted in the competition for an "Alternative Design for the Development of Battery Park," under auspices of the *Fine Arts Federation of New York*, were judged immediately after the close of the competition (August 11), photographs of the winning design were not available at press time for this month's issue. First prize of $500 went to *Walter W. W. Jones*, Architect, Brooklyn, New York; second prize ($100) was awarded to the joint entry of *Philip Sanfilippo* and *Vito P. Battista*, Architects, Brooklyn, New York, and *David Davis*, Architect, New York. Honorable mentions ($75 each) went to *Delano & Aldrich*, Architects, and *Harry Leslie Walker*, Architect, New York; *Maud Sargent*, Landscape Architect, New York.

The winning designs are currently on exhibition at the Architectural League, 115 E. 40th Street, New York, together with paintings and prints of the Battery at various periods.

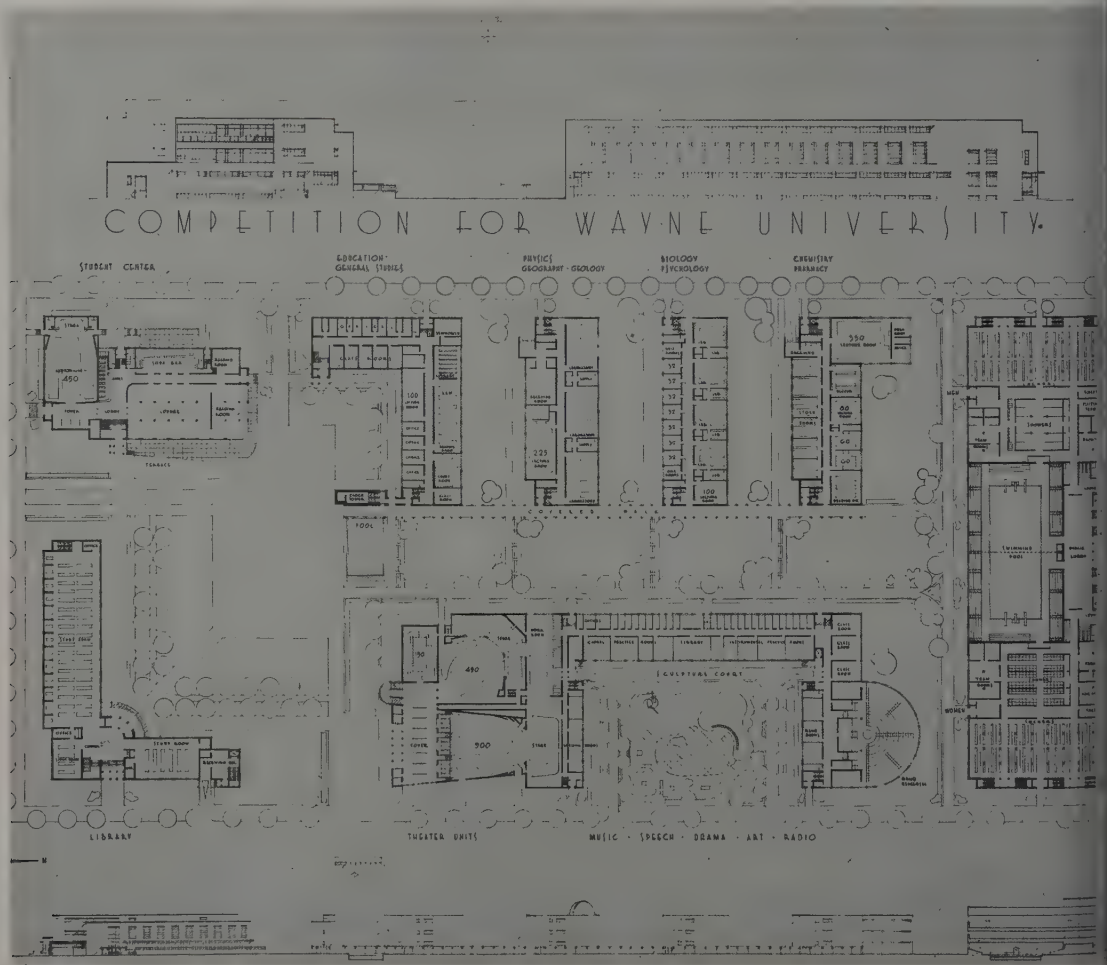
Readers may, meantime, find interesting a letter regarding this competition reproduced on Page 8 of this issue. It should be noted that the competition was held without author tion from City Authorities and that e program did not contain any impl tion that the design or services of competition winner would be utili by the City Authorities. This con tition was intended, rather, as "a tribution of the Fine Arts Federa to the furtherance of civic deve ment and the preservation of hist structures."

PILAFIAN WINS WAYNE COMPETITION

Suren Pilafian, a 32-year-old De architect, who was born in Tun and brought to this country whe child, was recently named the wi in the Wayne University (Detr architectural competition. The c petition, in two parts, was held to lect an architect for a student ce

(Continued on page 86)

Design for Wayne University Campus by Suren Pilafian. (Design of Student's Center Building on page 8



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Chrysler
Corporation

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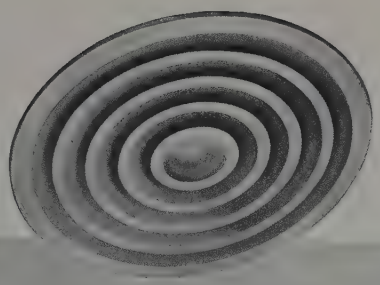
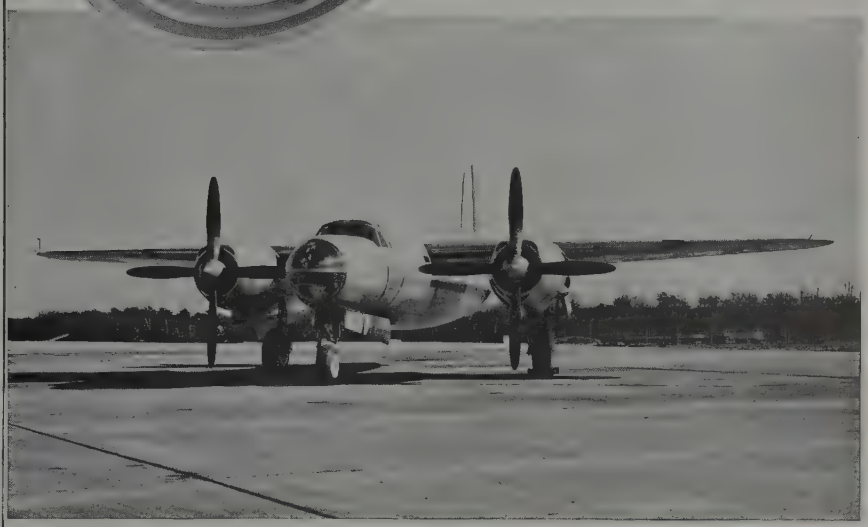
and Test Stand



BERLIN *and* TOKYO LOOK OUT!



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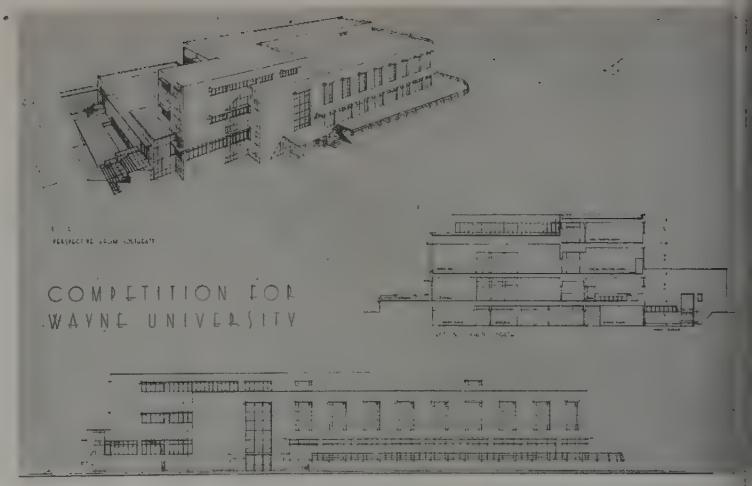
(Continued from page 82)

building, proposed as the first unit of a new Wayne University campus, and to provide a group plan and architectural scheme for a new campus. Second prize in the competition went to the firm of *Saarinen and Swanson*, Birmingham, Mich.; third prize to *Malcolm R. Stirton*, Detroit.

Paradoxically, the University is not likely to see a new campus until the war is over. At present, Wayne University is housed in an old high school building and a heterogenous collection of homes, flats, and churches spreading over several blocks. However, plans are being laid for the day when the University can be housed in its own buildings. The most recent step in planning the post-war development was the announcement of the winner of an architectural scheme for the present three-block area.

The Pilafian plan provides for eight major buildings and additional campus space. The Jury commended the placing in the plan of the University Art Center (theater, music, speech, art, drama, and music units) opposite the present Public Library in such a way as to form a continuation of the present art center group—the library and the Institute of Arts. The Jury premiated the Pilafian plan because of the excellent qualities in planning, not because it found a corresponding excellence in the exterior designs but rather in spite of the fact that it found the exteriors somewhat uninteresting.

The division of educational facilities into a number of comparatively small units (Student Center; College of Education and the School of General Studies; Physics, Geography and Geology; Biology and Psychology; Education; Music, Speech, Drama, Art, and Radio; and Library) will facilitate the growth of the University by making it possible for the authorities to build smaller units progressively as funds become available.



Student's Center Building, Wayne University. Suren Pilafian, Architect

Pilafian also won first prize for his design of the Students' Center Building (upper left in illustration on page 82), which was conducted as a separate competition.

The jury reported in part that it was impressed by the freedom with which the buildings were placed upon the site and by the open spaces with which they are surrounded. In every case the buildings have been located with good judgment, not only in respect to the environment and to the existing building, but equally to each other.

Although the competition attracted 46 entrants, many had to withdraw because of the pressure of war work. Eleven completed plans were considered by the following Jury: *John H. Webster*, Detroit Board of Education; *Dr. David B. Henry*, executive vice president of Wayne University; *Walter R. MacCornack*, Dean, School of Architecture, M. I. T.; *Joseph Hudnut*, head of the Harvard University Graduate School of Architecture; and *F. R. Walker*, of the architectural firm of Walker and Weeks, Cleveland. *Branson V. Gamber*, Detroit architect, was the professional adviser.

ARTISTS FOR VICTORY MUSEUM EXHIBITION

An exhibition of contemporary painting, sculpture, and graphic arts is scheduled to be held at the Metropolitan Museum of Art, New York from December 7 to February 22 under the auspices of Artists for Vic

(Continued on page 88)

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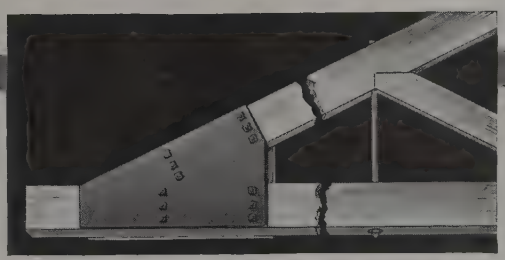

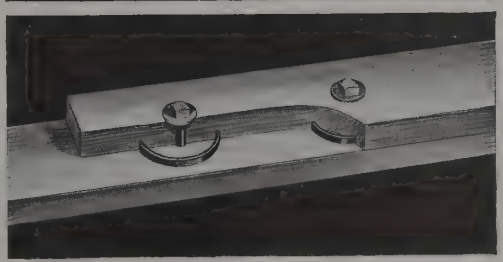

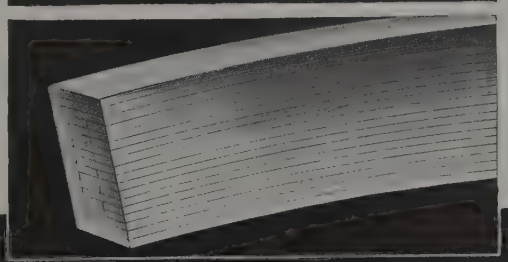

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(Continued from page 86)

tory, Inc. Purchase prizes totalling $52,000 for sculpture, paintings, prints are offered by the Museum trustees for works to be selected by a Jury of Award. In addition, the Jury will also give, in each medium, first, second, and third medals for outstanding examples of painting, sculpture or prints which are included in the exhibition by the Jury but which, because of public or private ownership, are *hors de concours* for purchase prizes.

Further details may be had from Artists for Victory, Inc., 101 Park Ave., New York.

ENGINEER CORPS DIVISION OFFICES

The Army Corps of Engineers recently established three new Division Engineer offices and transferred seven others. The complete list of Division Offices is published herewith for the benefit of architects seeking information on the construction activities of the Engineer Corps:

New England Division, 75 Federal St., Boston, Mass.

North Atlantic Division, 270 Broadway, New York City.

Middle Atlantic Division, 101 East Fayette St., Baltimore, Md.

Arlington (Va.) Division, 7[0] Columbia Pike, Arlington, Va.

South Atlantic Division, 50 Whi[te] hall St., Atlanta, Ga.

Upper Mississippi Valley Divisi[on] 915 Olive St., St. Louis, Mo.

Lower Mississippi Valley Divisi[on] P. O. Box 80, Vicksburg, Miss.

Southwestern Division, Cotton E[x]change Building, Dallas, Texas

Missouri River Division, 19th a[nd] Douglas Sts., Omaha, Nebr.

Ohio River Division, 1420 E[s] quirer Building, Cincinnati, Ohio

Great Lakes Division, 332 Michigan Ave., Chicago, Ill.

Mountain Division, 36½ W. S[ec]ond St., South, Salt Lake City, Uta[h]

South Pacific Division, 351 Ca[li]fornia St., San Francisco, Calif.

North Pacific Division, 500 P[i]tock Block, West 9th and Stark St[s] Portland, Ore.

MISSOURI REGISTRATION

The Missouri State Board of Regist[ra]tion for Architects and Professio[nal] Engineers, at its recent semi-annu[al] meeting, made a ruling concerning t[he] requirements of registration for arc[hi]tects and professional engineers, in a[n] swer to numerous requests for defin[i]information and clarification.

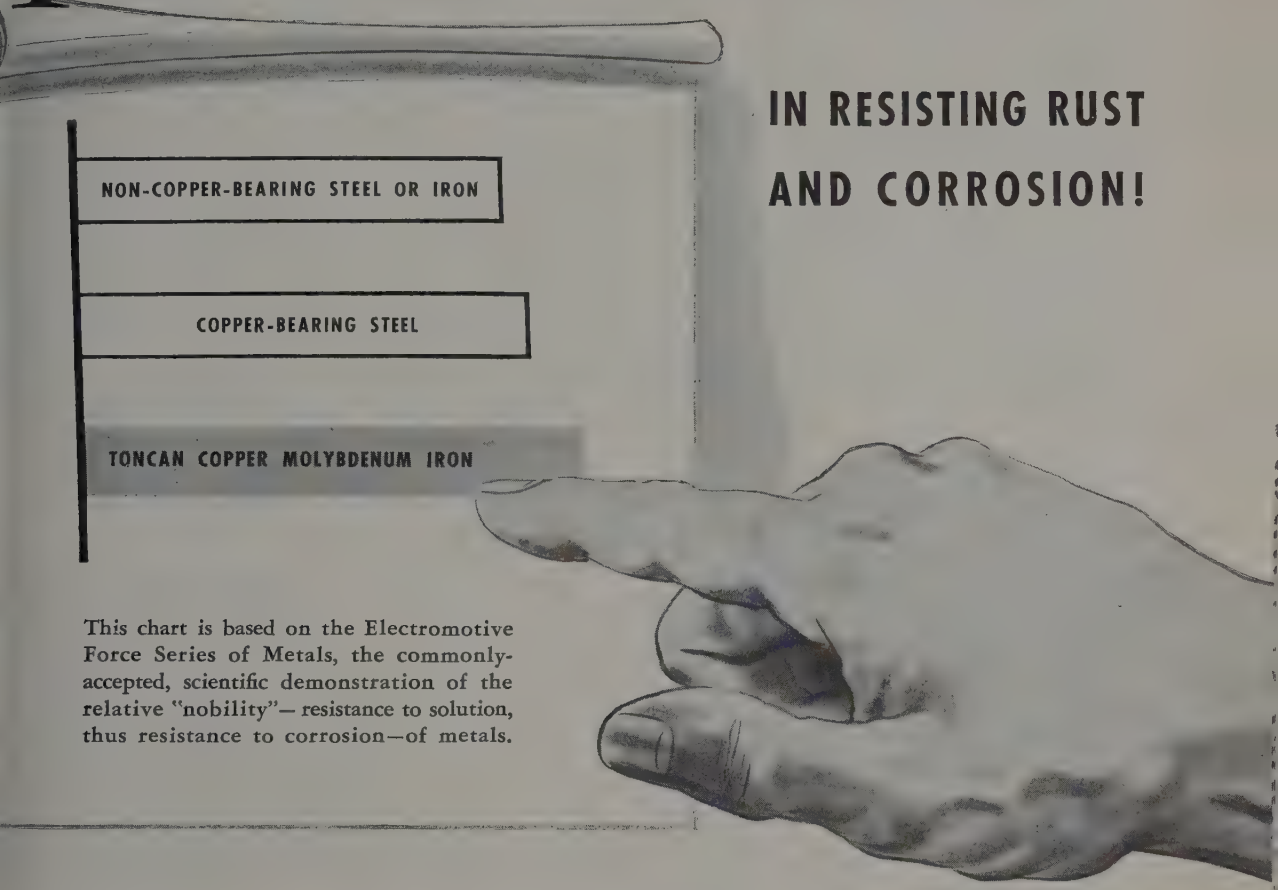
The Board decided that it is in kee[p]ing with the spirit of the registrati[on] law to require that all architects a[nd] engineers of Missouri be registered [in] accordance with an act to define a[nd] regulate the practice of both professio[ns] passed by the Missouri General A[s]sembly and approved August 2, unl[ess] specifically exempt in accordance w[ith] Section 17 of the law. Such exem[p]tions include, in part, land surveyo[rs] landscape architects, employees of arc[hi]itects and professional engineers (wh[o] such architects and engineers are qua[li]fied and registered), insurance inspe[c]tors, stationary engine operators, etc.

Section 16 of the law, known as t[he] "grandfather clause", expires Octob[er] 10. This Section permits registrati[on] without examination for all architec[ts] and professional engineers who subm[it] under oath, satisfactory evidence th[at] the applicant is of good character, h[as] been a resident of the State of Misso[uri] for at least one year immediately pr[e]ceding the date of his application, w[as] practicing architecture or professio[nal] engineering prior to the time this act b[e]came effective, and has had responsib[le] charge of work of important characte[r].

All Missouri architects and enginee[rs] who have not applied for registration b[y] October 10, unless specifically exem[pt] under the law, will be considered to b[e] practicing in violation of the abov[e] mentioned law.

Toncan Iron has a Head Start

IN RESISTING RUST AND CORROSION!



This chart is based on the Electromotive Force Series of Metals, the commonly-accepted, scientific demonstration of the relative "nobility"—resistance to solution, thus resistance to corrosion—of metals.

Right from the start, Toncan Iron Sheets have what it takes to resist corrosion—because Toncan Iron is an *alloy iron.* It is highly refined *open-hearth iron* with which the correct proportions of copper *and molybdenum* are alloyed to obtain the best rust-resistance of all ferrous metals in its price class.

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Write for the new book, "A Few Facts about Toncan Iron for Architects and Engineers"—and see Sweet's 13/6. Also see Section 27/3 for pipe; 23/5 for Steel and Tubes; 9/1 and 21/2 for Berger; 15/18 for Truscon Products.

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BOOKS AND PERIODICALS

BOOKS

CITY-WIDE STUDIES BY THE MAYOR'S COMMITTEE ON CITY PLANNING OF THE CITY OF NEW YORK. ($1.50, 3 volumes totaling 331 pages with 128 maps and 141 illustrations, 8 x 10½ inches — prepared with the assistance of the Work Projects Administration; published by the Mayor's Committee on City Planning)

Three modest and inexpensive volumes have just been published for the Mayor's Committee on City Planning of the City of New York and distributed by the Regional Plan Association. The Mayor's Committee was an interim committee established in 1934 under the direction of the late Bernard Deutsch, with Lawrence M. Orton, secretary, and F. Dodd McHugh, Technical Director, both now active on the New York City Planning Commission. The purpose of the Committee was to prepare the way for the establishment, under the Charter, of the City Planning Commission. An excellent series of studies were made using WPA labor and research technicians. Base maps were prepared which serve as models for other communities in the presentation of data. The Mayor's Committee availed itself of the then recently completed real property inventory and many studies were made which unfortunately had no publicity and were unknown to the public at large.

The books here reviewed are the final statements of the Committee which was superseded in 1938 by the City Planning Commission. The studies are published in three volumes. The first is "*Basic Factors in Planning*"; the second, "*Planning of Public Services*"; the third, "*Programming of Public Improvements.*" Whether residents of New York or not, any architect interested in community improvement must find these studies important for what they disclose of the technique involved. The study of conclusions and the methods of establishing residential areas are especially interesting, as well as the suggestions for the improvement of the New York Zoning Ordinance. The report on bulk zoning, in particular, is significant.

It is regrettable that much of this material had not been published until recently. It is hoped that the City Planning Commission will be able to continue such intelligent work in the future. No city can be properly planned without an intimate knowledge of its assets and its liabilities. The business of running a city is no different than the business of running a large industry.

Carl Feiss

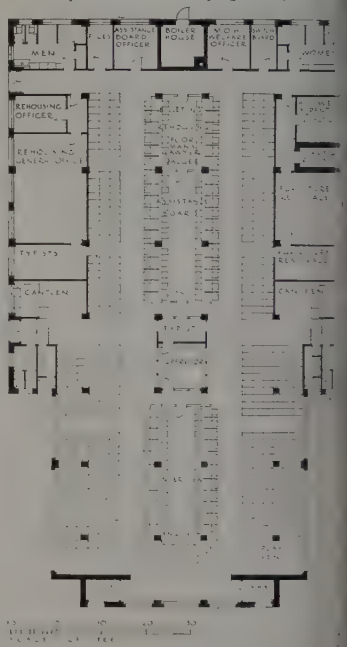
PERIODICALS

ENGLAND

THE ARCHITECTS' JOURNAL

Damage wrought in "socially naught urbane" Bath by the first of the so called *Baedeker Raids* is duly record in the July 2 issue of this magazin Valuable is the collection of old prin photographs, and sketches reproduce with notes on the historic monumen

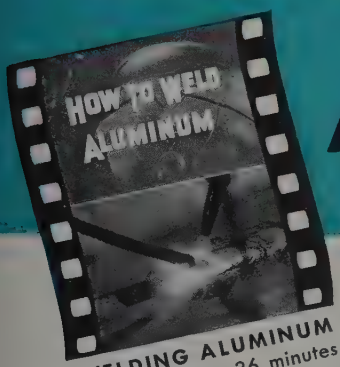
(Continued on page 92)



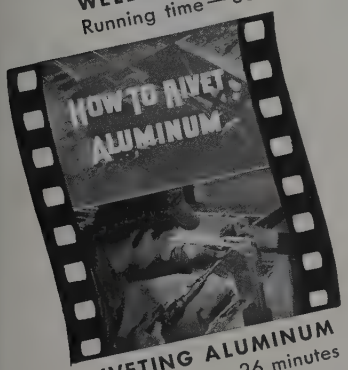
THE ARCHITECTURAL REVIEW introduces in its July issue the new building type reproduced here—"Information Center," designed by Matthews & Son to "incorporate in one building all the services provided for persons suffering as the result of air raids." The building is reinforced to afford the same protection as a standard public shelter

3 NEW FILMS

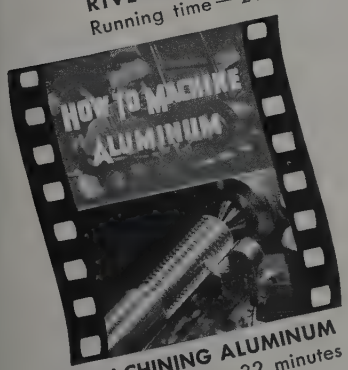
FOR TRAINING ALUMINUM WORKERS



WELDING ALUMINUM
Running time—36 minutes



RIVETING ALUMINUM
Running time—26 minutes



MACHINING ALUMINUM
Running time—32 minutes

Valuable "how-to-do-it" data on Welding, Riveting and Machining Aluminum is contained in these three, brand-new sound motion pictures. Designed to supplement texts and teaching, these films are offered for your assistance in training war workers in the fabrication and assembly of Aluminum Alloy parts and structures.

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If you want to purchase prints for your permanent library, they are available at cost, shipping charges prepaid. Prices follow.

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How To Rivet Aluminum	1200-ft. reel . . $42.80	2000-ft. reels . . $103.80
How To Weld Aluminum	1600-ft. reel . . 62.70	2000-ft. reels . . 176.30
How To Machine Aluminum	1200-ft. reel . . 50.70	2000-ft. reels . . 123.55

Send your requests for loan or purchase to Aluminum Company of America, 2198 Gulf Building, Pittsburgh, Pennsylvania.

See these films at the National Metal Exposition, Cleveland, October 12-16.

ALCOA ALUMINUM

BOOKS AND PERIODICALS

(Continued from page 90)

that have suffered. Noting that the elegance of Bath was all but smothered by a "chaos of industrial development and Bye-law housing" prior to the Blitz, *Astragal* comments aptly:

"Let's be frank about the Baedeker raids—it's not vandalism we British resent so much as infringement of our personality. We have our own subtle way of destroying the three-star article and we prefer to stick to it."

Professional debate over the rebuilding of London gets underway in the July 9 issue, with the *Hon. Lionel Brett*, a member of MARS, speaking out on the ambitious Plan for Rebuilding of London already advanced by that research group.

ARCHITECTURAL DESIGN AND CONSTRUCTION

Eight of the *Official Prefabricated Hut Types* now recommended in England are shown in the July issue of this magazine, in photographs and isometric drawings. These are simple structures for a variety of uses.

ARGENTINE

REVISTA DE ARQUITECTURA

If this curious juxtaposition of antique "modern," and functional architectur (February issue) truly reflects Arch tecture's status in Argentina, Nort American practitioners can sympathiz with their South American cousins. W face much the same conditions here.

To take three examples: Pictu esque, yet perhaps too studiously an tique, is a shrine in Catamarca. O the other hand, modern simplified cor struction flavors the urban apartmen houses shown; but apparently th excellent structural technique has out stripped planning ability. The dumb bell and railroad plans used have, i this country, clearly demonstrated their inefficiency and their tendency to pro duce slums. But the simplicity o appearance, which must reduce cost and incorporation of basement garages which must increase rentability, als deserve notice.

Among several competitions, one fo "A Concert Hall" is both an archi tectural and an acoustical problem Despite over-emphasis on proficiency i acoustical engineering, this provides good example of design for a specific function.

UNITED STATES

ARCHITECT AND ENGINEER

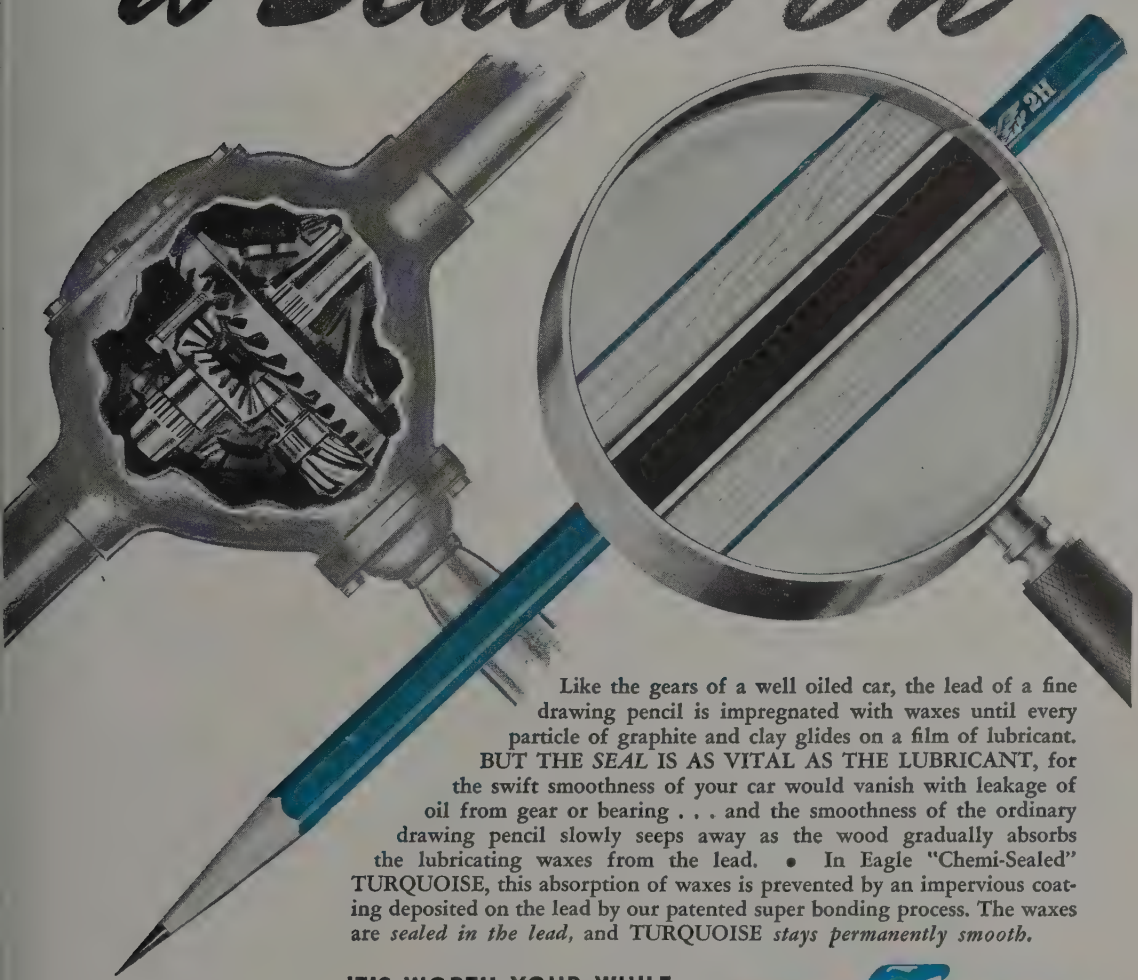
Housing projects spreading over th hills around San Francisco, under long-range program with *Architect Albert J. Evers* serving as Executive Director, are pictured in the July issu of this magazine. The work of leadin Coast Architects, these communities o tomorrow are worthy of study b Architects in areas more bound by tra dition. Directed to the same audienc is the exhibition, "*House Plans Fo War And Post-War*," by *Joseph Allen Stein*, reviewed in the same issue.

THE AMERICAN CITY

Factors that must be taken into accoun before decent shelter can be provided to replace the substandard homes o 225,000 families in Puerto Rico are reviewed by *Governor R. G. Tugwell* in the July issue of this publication Although the situation is different from any encountered on the mainland i seems equally a challenge to American ingenuity. Significantly, high hopes are based on a Post-War Housing Program.

(Continued on page 94)

TURQUOISE *Smoothness is Sealed In*



Like the gears of a well oiled car, the lead of a fine drawing pencil is impregnated with waxes until every particle of graphite and clay glides on a film of lubricant. BUT THE *SEAL* IS AS VITAL AS THE LUBRICANT, for the swift smoothness of your car would vanish with leakage of oil from gear or bearing . . . and the smoothness of the ordinary drawing pencil slowly seeps away as the wood gradually absorbs the lubricating waxes from the lead. • In Eagle "Chemi-Sealed" TURQUOISE, this absorption of waxes is prevented by an impervious coating deposited on the lead by our patented super bonding process. The waxes are *sealed in the lead,* and TURQUOISE *stays permanently smooth.*

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(Continued from page 92)

INTERIORS

This magazine features its second annual portfolio of representative work by American Architects and Designers, entitled "*The Year's Work*," in its August issue. Trend noted is the interest exhibited in "all sorts of dual purpose and unit furniture of remarkable ingenuity." The 36 examples selected for this handsome presentation reflect the 1942 thoughts of the following contributors to the portfolio: *Richard J. Neutra*, (2 rooms) *Albert Kahn, Morris Lapidus, Paul László, Howard Meyer, Eugene Schoen & Sons, T. H. Robsjohn-Gibbings, C. Coggeshall, Paul T. Frankl, Joseph A. Fernandez, Elizabeth C. Draper, Samuel A. Marx, Raymond Loewy, Joseph Aronson, Virginia Conner, Dorothy Draper, Percival Goodman, Thedlow, Inc.*, (2 rooms) *Ruth T. Strauss, Lester Gaba, Walter M. Ballard Company, Barlow-Schneider, Inc., William Pahlmann, Rudi Blesh* (2 rooms) *Gilbert Rohde, Intramura Inc., Robert Hiden, Vinicio Faladin Leon Barmache, Emma Romeyn Ernst Schwadron, Tom Douglas, Ha old M. Schwartz*, and *Jac Jessman.*

LITURGICAL ARTS

Seven of the 64 sculptors' models sub mitted in the competition conducted b the Liturgical Arts Society for a statu of "*Christ, the Light of the World* to be placed in the central niche of th new headquarters building of the Na tional Catholic Welfare Conference i Washington, D. C., are shown in th August issue of this quarterly.

Three of the sculptors—*Robert C Koepnick, Georg Kratina*, and *Su zanne Nicolas*—have been designate winners of the competition and are t submit revisions of their original con ceptions early in October for final judg ment. This competition "suggests dependable way for the Church to ob tain the highest expression in religiou art," in the opinion of *Lee Lawrie* Chairman of the Jury, who confesse in his report:

"To my surprise . . . the churchme revealed as keen art judgment and a immediate perception of possibilities i the development of some of the de signs as we, and I felt that they were as cognizant of the artistic nuances They were even more courageous i their reception of dynamic qualities an in their willingness to forego the tra ditional representations."

*

STATE HOUSING AGENCIES, by Dorothy Schaffter. (808 pages, $7.50—Columbia University Press, New York.)

Miss Schaffter, Professor of Government at Vassar College, some years ago staked out as a field for research state housing agencies, a sector which she could make truly her own, because no one else would bother with it. The sudden recognition of the national interest in housing followed so quickly upon the late recognition of the public interest in housing (other than restrictive regulation) that there was no time for the common development of a new function of government: action by cities with State help, leading ultimately to federal action. That had been the natural history of schools and roads, and Miss Schaffter is troubled that it has not been the history of public housing. Somehow she feels that this development is unorthodox, although as a student of government she must be aware of the increasing number of direct federal-city relationships, in which the role of the States is that of delegating to their "creatures," the cities, the

(Continued on page 96)

Out of the dust and rubble will rise a city of steel

WAR'S destruction teaches many lessons. One is that man must build etter and stronger. Of those buildings iraculously left standing in the midst rubble and ruin — many owe their fety to steel.

To the architect who is planning to-orrow's homes, shops and factories, at has more than ordinary significance. rength and safety are fundamental quirements in all durable structures. ut while basic, they are not the only nsideration. And that is where steel oves its unusual merit.

For out of the laboratory of war, steel ill emerge even more versatile, more daptable and more suited to the needs modern construction. It is no idle ophecy that the material which proved the most potent weapon of destruction will also prove its superior usefulness to the arts of peace.

The architect seeking to combine strength and safety with beauty will find on turning to steel that freedom of choice so essential to creative design.

From the war of the nations must inevitably follow the war of materials. Survival is merely a question of merit. Today, your attention is necessarily directed to the materials at hand. But tomorrow it will be different. You will have the privilege of choice. Expect big things of steel. For you will find that steel, one of the oldest products of the arts, is still the newest—the natural choice for the cities of the future, where strength, beauty and utility will be combined.

HOW STEEL IS IMPROVING CONSTRUCTION

Faster, cheaper construction. *Better ways to use steel have resulted in buildings being completed months ahead of schedule, with large savings in cost.*

Stronger, more flexible construction. *New methods of fabrication with steel make buildings more resistant to explosions, fire, earthquake, lightning and storms of all kinds.*

More durable construction. *Steel can be made as corrosion-resistant as you want by proper alloying or surface treatment. U·S·S Stainless* Steel, COR-TEN, *Copper Steel,* VITRENAMEL, *Paintbond, Dul-Kote, Terne plate, Galvanized steel—all have different degrees of corrosion resistance making them suitable for particular jobs.*

Better designs in steel. *Architects are contributing immeasurably to the better use of steel. Business buildings, factories, homes are not only practical, but beautiful when correctly designed with steel.*

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Scully Steel Products Company, Chicago, *Warehouse Distributors*
United States Steel Export Company, New York

UNITED STATES STEEL

(Continued from page 94)

necessary power to act. According to Miss Schaffter, "each State within the United States is a powerful, competent, and wealthy unit," and should therefore have its place in the public housing program.

To the extent that public housing was a pre-war or is to be a post-war part of a public works program to help achieve full employment, the Federal Government is the only agency which can manipulate fiscal policy controls effectively, to know when to prime the pump and when to stop priming. It seems clear that most States are not "wealthy" enough to bring to housing the necessary credit; and few of them are sufficiently integrated administratively to give continuous direction and supervision to a program of housing. Finally, it is the sad fact that the legislatures of the States in which our largest urban populations are congregated are still so rural minded as to be unwilling to take leadership in what has seemed to be basically an urban problem.

Certainly, it is vital that local interest and leadership be released, that decisions be made, not by the dead hand of Washington, but by persons near enough to the locale to be sensitive to local variations in need. And rural housing must be recognized as a problem affected with a public interest. Miss Schaffter is to be respected for emphasizing these points. It does not follow, however, that turning housing programs over to the States would achieve the desired results. And at this time in the world's history there seems little justification for more than a monograph of 75 pages to give the reader the substance here spun out to 808.

Charles S. Ascher

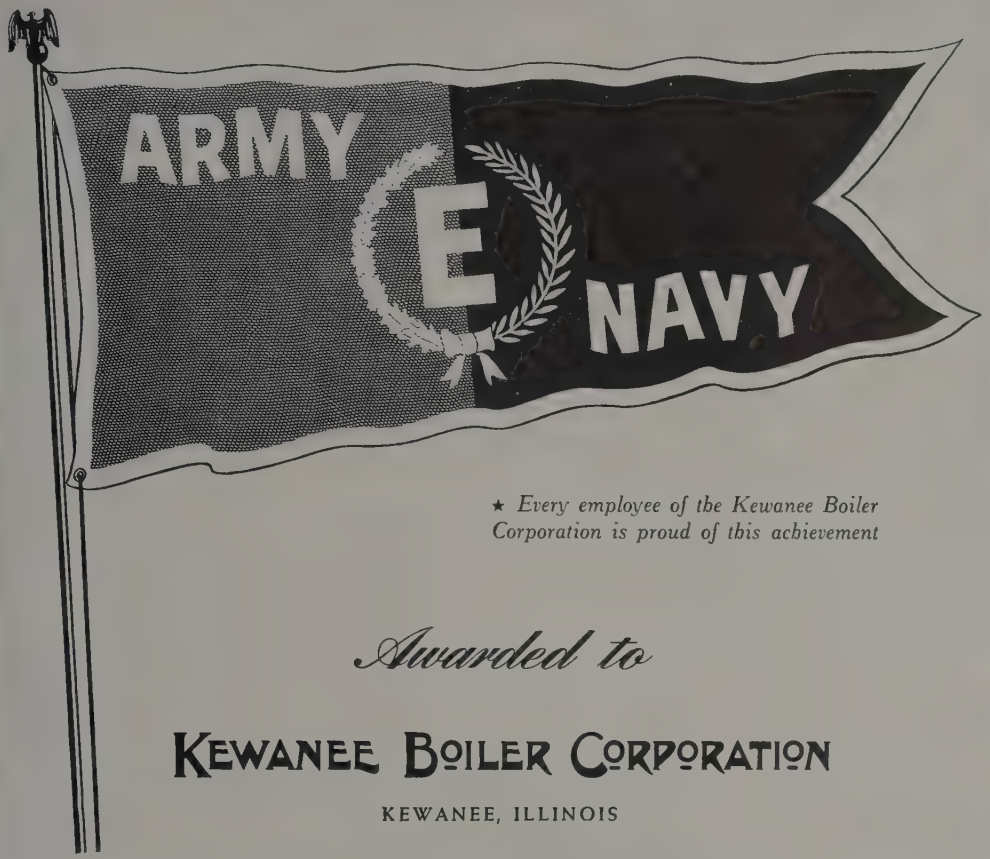
*

DESIGN OF MODERN INTERIORS, by James Ford and Katherine Morrow Ford. ($5, 8½"x11", 324 illustrations — Architectural Book Publishing Co., Inc., 112 W. 46th St., New York)

As carefully organized as a well-planned interior, *Design of Modern Interiors* is a valuable record of contemporary accomplishment in this field. The authors are thoroughly modern in their approach, treating the subject, with their own sound concept of modern, as "evolutionary." An interesting preface, taking into account that these are war times, and an eight-page discussion, concentrated but trenchant, cover Modern Design in Periods of War and Transition; The Essence of Contemporary Design; Organization of Space Within the Home; Basis for Judging Adequacy of Space; Contemporary Furniture Design; and a brief word on Color.

Sharp, clear photographs, well-chosen, illustrate a generous portion of outstanding work in modern interiors. The illustrations are intelligently divided into series presenting Spatial Relationship of Rooms, Connecting Spaces, Living Spaces, Service Areas, Sleeping Spaces, Special Activity Spaces, Outdoor Living and Play Spaces, Details and Furniture.

If there is a weakness in the book, it is in the section devoted to Furniture, but that may well be because of an actual lack of existing worthwhile material to put into such pages. Six pages of brief statements by architects and designers, invited to express their concepts of contemporary trends, prove only that the ability to be creative graphically is seldom married to the ability to express in words the thought behind that creativeness. A three-way Index, of Architects and Designers, of Houses and Apartments, and of Localities, is helpful for reference. **L. S.**



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MANUFACTURERS' LITERATURE

Publications mentioned here are all 8½" x 11" unless otherwise specified and will be sent free of charge, upon request. When writing for any of the literature noted here, please mention THE NEW PENCIL POINTS.

Truss Design. Folder containing condensed collection of data on design of truss joints with timber connectors. Included are: "*Designing Truss Joints with Timber Connectors*"—analyses and examples of timber connectors; "*Timber Connector Pages from Douglas Fir Use Book*"—chords between web members; web members between chords; plywood gusset plates; strap and pin joints; "*Arrangement and Spacing of Timber Connectors*"—factors governing arrangements and spacing; "*Wood—Its Characteristics and Uses*"—properties of wood and technology of its use; "*Standard Structural Grades of Douglas Fir*"—notes on use, working stresses. West Coast Lumbermen's Association, Stuart Bldg., Seattle, Wash.

A. I. A. Filing System. 1942 edition of the "Standard Filing System and Alphabetical Index" issued by the American Institute of Architects, 1741 New York Ave., N.W., Washington, D. C., contains filing information on various building materials, appliances, and equipment. $1. (A.I.A. Document No. 172.)

Plywood. "Techniques of Plywood" incorporates thirty chapters which originally appeared in *Hardwood Record*. Articles cover all phases of plywood manufacture and are written from a technical standpoint, primarily for engineers, designers, and users of plywood. Five main sections: Strength, Deformation and Elastic Stability of Plywood; Elastic Theory of Wood and Plywood; Manufacture of Plywood; Warpage of Plywood; Bending, Molding, and Embossing of Plywood. 4⅝" x 7⅝", $2.50 per copy. I. F. Laucks, Inc., Seattle, Wash.

Surfacing Compound. Single sheet leaflet, from Central Paint & Varnish Works, 63 Prospect St., Brooklyn, N. Y., discusses the application of Lev-L-Flor, a ready-mixed, synthetic, resurfacing compound for use on wood, concrete, and other floor surfaces.

Service Manual. A new 24-page manual, "Civilian Conservation of the Btu," 5½ x 8½", from Carrier Corp., Syracuse, N. Y., contains instructions which each owner needs in order to give routine care to air conditioning, refrigerating, and heating equipment. Instructions are indexed for ready reference, described for easy identification, and explained in non-technical terms.

Corrosion-resistant Coatings. 4-page folder, from Carbozite Corp., First National Bank Bldg., Pittsburgh, Pa., discusses the broad application possibilities in industry of coatings for steel, wood, concrete for protection against corrosive effects of acids, alkali, fumes, rust, sulphur water, or ordinary moisture.

Pine Paneling. Two-color leaflets, with actual-use illustrations, from Western Pine Association, Yeon Bldg., Portland, Ore. Leaflet 312, "Nautical Bunks and Walls of Knotty Pine," 3¼" x 5¾", presents ideas for built-in bunks and other features for various types of rooms. Leaflet 313, "Make Your Attic Livable," 3¼" x 6", shows how idle attic space may be converted into habitable rooms.

Lead Alloy Pipe. The use of Type K Tube-Loy pipe (a water service pipe extruded from an alloy of lead,

magnesium, calcium, tin) is discussed in a 12-page catalog issued recently by American Smelting & Refining Co., 120 Broadway, New York. Tests, cost, and installation are described in connection with the use of flared fittings made especially for the product by the Grinnell Co.

Home Modernization. New edition of "The Open House," recently published by Ponderosa Pine Woodwork, 111 W. Washington St., Chicago, Ill., offers timely ideas adaptable to civilian home and farm home modernization and repairs. Primary purpose of the 32-page book is to show how Ponderosa Pine stock millwork items help to increase convenience in homes.

Industrial Floors. Washington Concrete Co., 350 Fifth Ave., New York. Small booklet—"Secret of Laying a Heavy Duty Industrial Floor"—discusses characteristics of industrial floors, finishing, etc.

Air Diffuser. Catalog F-1497-2, 8 pages, from Barber-Colman Co., Rockford, Ill., illustrates and describes the functions and construction of the Venturi-Flo overhead-type air diffuser. July, 1942. Presented are the recessed type, surface type, flush type, and thermostatically-controlled type for extreme mounting heights.

Also issued: Catalog F-1415-4 (A.I.A. File No. 03-F). 24 pages, July, 1942, on Uni-Flo sidewall grilles and registers, and Venturi-Flo overhead air diffusers.

Air Conditioning. Condensed Catalog AC-154, 12 pages, July, 1942, from Carrier Corp., Syracuse, N. Y., lists the various air conditioning, heating, and refrigerating equipment made by the firm. A special section groups the products according to their functional classification, then lists those industries requiring the different types of installations. Included: specifications, dimensions, weights, etc.

Camouflage Paints. Pamphlet from Devoe & Raynolds Co., Inc., 1st Ave. and 44th St., New York. Use of paints for camouflage. Sections of the folder are devoted to shatterproofing coating (which eliminates danger from flying glass), fire-retarding paint (for use on interior surfaces likely to be damaged by fire from incendiaries), and the accident-prevention qualities of luminous paint during blackouts.

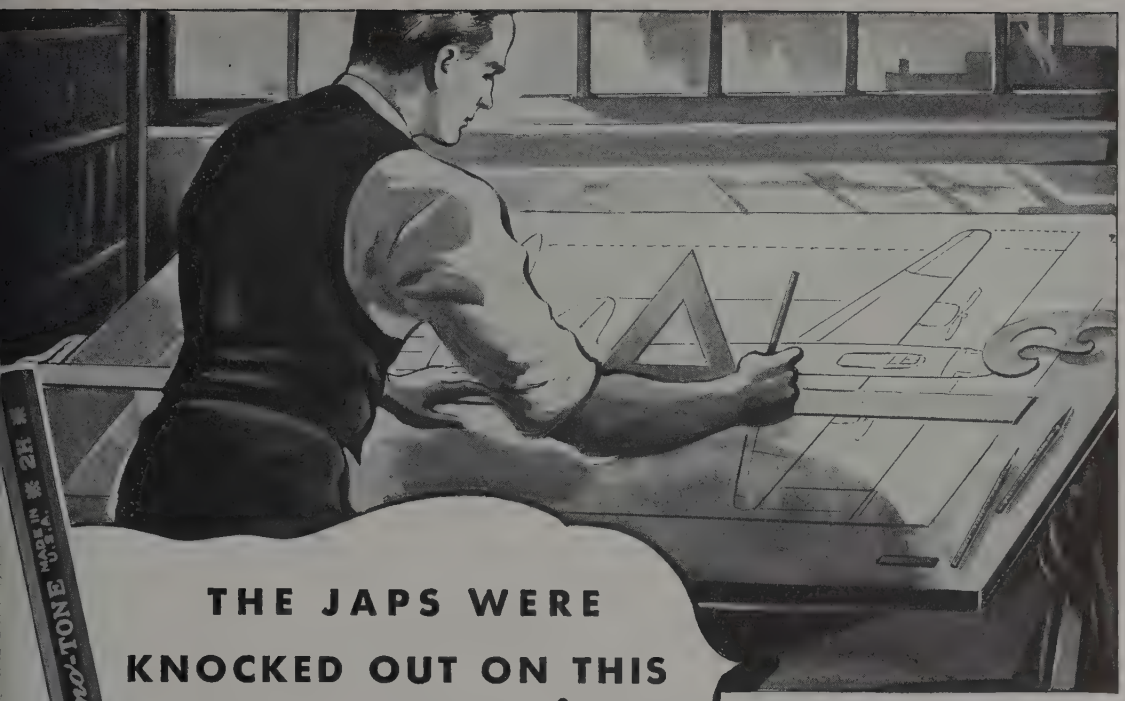
Lighting. 88-page Catalog 42, July, 1942, Curtis Lighting, Inc., 6135 W. 65th St., Chicago, Ill. Specifications, foot-candle data, Coefficients of Utilization charts, equipment spacing, other data on fluorescent and incandescent lighting.

Tank Gauges. Dial type liquid level gauges for fuel oil, diesel oil, gasoline, and other liquids are described in a 4-page Bulletin 7405 issued by The Liquidometer Corp., 37th St. at Skillman St., Long Island City, N. Y.

Also issued: Bulletin 6405, 4 pages, on direct reading, and dial type hydrostatic gauges.

White Paint. Feature article in the current issue of PAINT PROGRESS, (Vol. 3, No. 2, A.I.A. File No. 25), issued by The New Jersey Zinc Co., 160 Front St., New York, discusses the painting of street intersections, curbings, and various obstructions with white paint for better visibility.

(Continued on page 100)



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MANUFACTURERS' LITERATURE

(Continued from page 98)

Ventilators. Bulletin 27 UST-1, 4 pages, August, 1942, from Carrier Corp., Syracuse, N. Y., illustrates the three types of war plant ventilators (exhaust, supply, tempering) for blackout and other factory buildings. Specifications, dimension drawings, tables.

Self-Locking Nuts. Wall chart, 21 x 27", explaining the uses of the various types of self-locking nuts, may be had from Elastic Stop Nut Corp., 2332 Vauxhall Road, Union, N. J. Chart has an illustrated description of the basic principle by which a self-locking action is obtained, and cross section drawings showing the method of application of the nine types most generally used.

Cabinet Shower. 4-page folder, July, 1942, describes the Model V non-metallic cabinet shower that conserves critical materials. Specifications, installation details also included. Henry Weis Mfg. Co., Inc., Elkhart, Ind.

Truscon Literature. Effective black out of industrial and other buildings. 8 pages, Catalog A-602. Truscon Steel Co., Youngstown, Ohio.

Also published—24-page booklet 6 x 9, with suggestions and tables covering use of welded wire reinforcing in building construction and the manufacture of reinforced concrete pipe. Handbook G-60.

Glass Ideas. Folder of installation details showing practical uses of glass. All necessary information is outlined, and each step is carefully detailed. 16 installation details in a folder. May, 1942. Libby-Owens-Ford Glass Co., Toledo, Ohio.

Also published: 36-page catalog, May, 1942. Illustrated are methods showing how glass can be used in remodeling present homes to provide for additional living space; how old homes can be modernized and converted into rental properties.

Stove Manual. Construction features, cross-section views, specifications of the new Warm Morning coal heater, a portable unit, are contained in a 16-page booklet, 5½ x 8½". May, 1942. Locke Stove Co., 114 W. 11th St., Kansas City, Mo.

(Continued on page 102)

artime ways to use "Pittsburgh" Glass!

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MANUFACTURERS' LITERATURE

(Continued from page 100)

Construction. Pictorial presentation of use of Q-Panels in a modern black-out airplane manufacturing plant. 24 pages. Four blue-print type pages show architectural treatment for a blackout building and a fenestrated building. H. H. Robertson Co., Pittsburgh, Pa.

Gypsum Lath. Information on sizes, weight, fire resistance ratings, sound transmission, insulation, suggested specifications for the three types of gypsum lath (plain, perforated, insulating). 12 pages, A.I.A. File No. 20-B-3. Gypsum Association, 211 W. Wacker Drive, Chicago, Ill.

Blackout. Methods of handling four typical blackout problems — windows, skylights, doors, and truck loading platforms. The Celotex Corp., 919 N. Michigan Ave., Chicago, Ill.

Fluorescent Lighting. Features of the Compco rectified fluorescent lighting unit for industrial applications. 4-page folder, in color. Commercial Metal Products Co., 2251 W. St. Paul Ave., Chicago, Ill.

Flush Valves. 16-page manual on flush valve maintenance. "Trouble-shooter" chart gives condensed data on locating trouble sources. June, 1942. Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago.

Concrete Construction. Third edition, January, 1942, "Manual of Standard Practice," completely revised, 64 pages, A.I.A. File No. 4-E-2. Free to engineers and architects. Extra copies, 20 cents. Concrete Reinforcing Steel Institute, Builders Bldg., Chicago.

Glued Prefabricated Houses. Advantages of glue for shop assembly of prefabricated houses, what type of glue to use in terms of Government specifications. 6 pages. A.I.A. File No. 19-M (new number), April, 1942. Casein Co. of America, 350 Madison Ave., New York.

Roof Slabs. Precast concrete simulating roof slabs, channel slabs, concrete nailing slabs, acoustical slabs, etc. Included are detail sheets of channel slabs, nailing slabs, interlocking slabs. Catalog 103, 48 pages, A.I.A. File No. 12-E-2. Federal-American Cement Tile Co., 608 S. Dearborn St., Chicago.

(Continued on page 104)

A large part of Uncle Sam's two-ocean navy will never go to sea. For its shore establishments—naval and air bases, training stations, medical centers—it needs *buildings*, thousands of them. Much of the hardware for this vast construction program is supplied by Stanley.

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(Continued from page 102)

Roofing, Siding. APS (Asphalt Protected Steel) siding and roofing for industrial buildings. 12 pages of technical data and sectional details, May, 1942. Levinson Steel Sales Co., 33 Pride St., Pittsburgh, Pa.

Air Cleaner. Application of the electrostatic principle to clean ventilating air. 24 pages, 5½ x 8¼, Bulletin B-2187. Westinghouse Electric & Mfg. Co., 1216 W. 58th St., Cleveland, Ohio.

Office Construction. Versatility of Transite movable asbestos walls for speedy construction of offices in industrial plants. 4 pages, folder TR-29A, May, 1942. Johns-Manville, 22 E. 40th St., New York.

Data Book. Westinghouse Architects' and Engineers' Data Book. Complete compilation of Westinghouse equipment including air cleaning and conditioning, elevator, lighting, stoker, wiring and X-ray equipment as well as many others. Also pertinent architectural and engineering data. 178 pages, edition 1942-43. Westinghouse Electric & Mfg. Co., 306 Fourth Avenue, Pittsburgh, Pa.

Radiators and Boilers. Revamped catalog has latest information for current market conditions. Only the slim tube radiators now permitted by WPB are shown. Included: New IBRM coal-firing conversion factors; increased ratings for commercial cast iron boilers recently adopted by NAHPACC. National Radiator Co., 221 Central Ave., Johnstown, Pa.

GOVERNMENT PUBLICATIONS

Protective Concealment. Civilian defense, protective concealment; prepared by War Department. March 1942. iv+68 p. il. 4°. Paper. Pr 32.4402: P 94. From Superintendent of Documents, Washington, 25c.

Plumbing. Farm plumbing; by George M. Warren. (October 1924, revised June 1933, reprint 1942.) (2) +21 p. il. (Agriculture Dept. Farmers' bulletin 1426.) Paper. A 1.9:1426/3-6. From Superintendent of Documents, Washington, 5c.

Floor Coverings. Performance test of floor coverings for use in low-cost housing, pt. 4; by Percy A. Sigler and Elmer A. Koerner. March 2, 1942. ii+21 p. il. 4° (Building materials and structures report BMS80.) Paper. C 13.29:80. From Superintendent of Documents, Washington, 15c.

Pipe Fittings. (Gray cast iron, malleable iron, and brass or bronze.) 1942. iv+22 p. (Simplified practice recommendation R 185-42.) (Effective date, January 1, 1942.) Paper. C 13.12/1:185, Superintendent of Documents, Washington, 10c.

Plumbing. Supplement to BH13, Recommended minimum requirements for plumbing, changes in specifications. November 15, 1941. 1 p. C 13.25:13/2/supp.-3. From National Bureau of Standards, Washington, free.

Natural Sines and Cosines: to 8 decimal places. 1942. 541 p. large 8°. (Special publication 231.) Cloth. C 4.19:231. Superintendent of Documents, Washington, $1.75.

Heaters. Flue-connected oil-burning space heaters equipped with vaporizing pot-type burners, recorded voluntary standard of the trade. 1942. ii+23 p. il. 1 pl. (Commercial standard CS101-43.) (Effective date for new production from Jan. 1, 1943.) Paper. C 13.20:101. Superintendent of Documents, Washington, 10c.

Furnaces. Gas floor furnaces, gravity circulating type, recorded voluntary standard of the trade. 1942. ii+14 p. (Commercial standard CS99-42) (Effective date for new production from May 25, 1942.) Paper. C 13.20:99. Superintendent of Documents, Washington, 5c.

Oil Burners. Automatic mechanical-draft oil burners designed for domestic installations, recorded voluntary standard of the trade; 2nd edition. 1942. ii+25 p. (Commercial standard CS75-42.) (Effective date for new production from July 20, 1942. Supersedes CS75-39.) Paper. C 13.20:75/2. Su-

(Continued on page 106)

(Continued from page 104)

perintendent of Documents, Washington, 10c.

Building. Field inspectors' check list for building construction, report of Subcommittee on Structure, Central Housing Committee on Research, Design and Construction. Apr. 8, 1942. vii+68+(3) p. 12°. (Building materials and structures report BMS81.) Paper. C 13.29:81. Superintendent of Documents, Washington, 20c.

Commercial Standards (Series). List of Commercial standards (publications of National Bureau of Standards); revised to Apr. 1, 1942. (1942.) 6 p. 4°. (Letter circular LC-691.) (Processed. Supersedes LC-676.) C 13.16:691. National Bureau of Standards, Washington, free.

Soil-Corrosion Studies, 1939: Ferrous and nonferrous corrosion-resistant materials; by Kirk H. Logan. (1942.) p. 379-400, il. (Research paper RP1460.) (From Journal of Research of National Bureau of Standards, v. 28, Mar. 1942.) Paper. C 13.22/a:1460. Superintendent of Documents, Washington, 10c.

Blackouts. Suggested regulations for large apartment houses in blackouts and air raids. (1942.) 20 p. il. 4°. Paper. Pr 32.4406:B56/3. Superintendent of Documents, Washington, 10c.

*

THREE TERMS

The School of Design in Chicago has announced its wartime program which will divide the school year into three terms: *Fall Term* of eighteen weeks; *Spring Term* of seventeen weeks; and *Summer Term* of eleven weeks, (six weeks for visiting students).

This arrangement of the curriculum shortens the four years' course for designers to two years and nine months (8 terms) and the six years' course for architects to four years (12 terms). The Fall semester starts on September 14.

The School has been able to develop a number of *war designs and substitutes* for priority materials. Further it has given consideration in its curriculum to *Opportunities for Women*, created by the war needs, such as Blue Print Reading, Mechanical Drawing, Inspection, etc. It has also introduced Model Airplane building, Plastics and Dress Design, Motion Picture, War display, and will continue its very successful *Camouflage course*, in which the principles of camouflage, military as well as industrial, are taught.

*

Office Space Available. Penthouse, 10 W. 33rd St., New York. Architect tenants. Various accommodations available. *G. Piers Brookfield.* Phone Pe 6-4896.

Wanted, in good condition, books by Samuel Chamberlain — "Tudor Homes of England," "A Small House in the Sun," "Sketches of Modern Spanish Architecture." Write stating condition and price wanted postpaid. *Ewing Waterhouse*, 145 Porfirio Diaz St., El Paso, Tex.

H. J. Guenther, 356 Second Ave., Albany, N. Y., has the following copies of PENCIL POINTS for sale: 1923-1938 (not all issues available). Complete issues are available for 1927-1935.

Robert E. Wick, *Draftsman*, 915 N. Drake Ave., Chicago, has the following copies of PENCIL POINTS for sale as a lot or as individual copies: Jan. 1938-Dec. 1941.

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It isn't guarded at the Brooklyn Navy Yard, or tested at Aberdeen.

But it's the toughest weapon these men you are looking at will ever take into battle. It's the stuff with which all our wars are won.

The boy in the uniform doesn't call it *morale*. That's a cold potatoes word for something John American feels deep and warm inside.

Perhaps he can't give it a name. But he can tell you what it's made of.

It's made of the thrill he gets when his troop train stops at a junction point and fifty good-looking girls are at the station with cigarettes.

It's made of the appreciation he feels for a bright new USO clubhouse where he and his friends can go for a few hours' rest and relaxation.

It's made of laughter and music—when Bob Hope or Lana Turner visits his camp with a USO show.

It's even made of a cup of coffee and a Yankee smile—at some lone outpost in Alaska or the Caribbean

Maybe it's just a feeling of kinship with this land of a hundred million generous people. Maybe it's just the understanding that this whole country cares; that the soldier is bone of our bone; that he and we are one.

Name it if you can. But it's the secret weapon of a democratic army.

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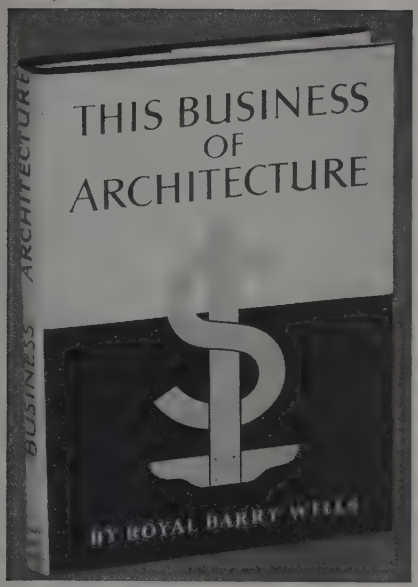

THE PRACTICAL WISDOM that grew from dealing with perhaps thousands of clients, contractors, bankers, and others in the building field permeates this book and makes it of great value to any architect, young or old, who wants to increase his chance of success in the practice of architecture.

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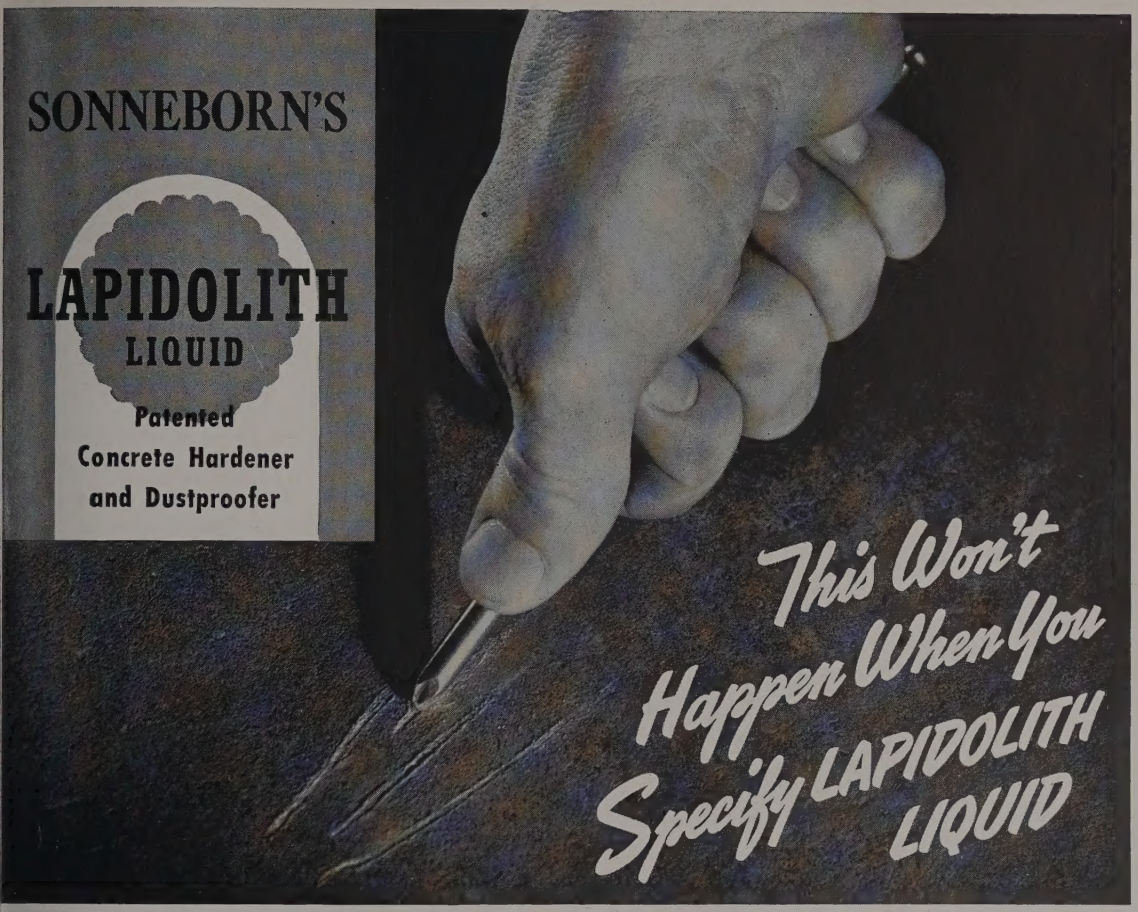

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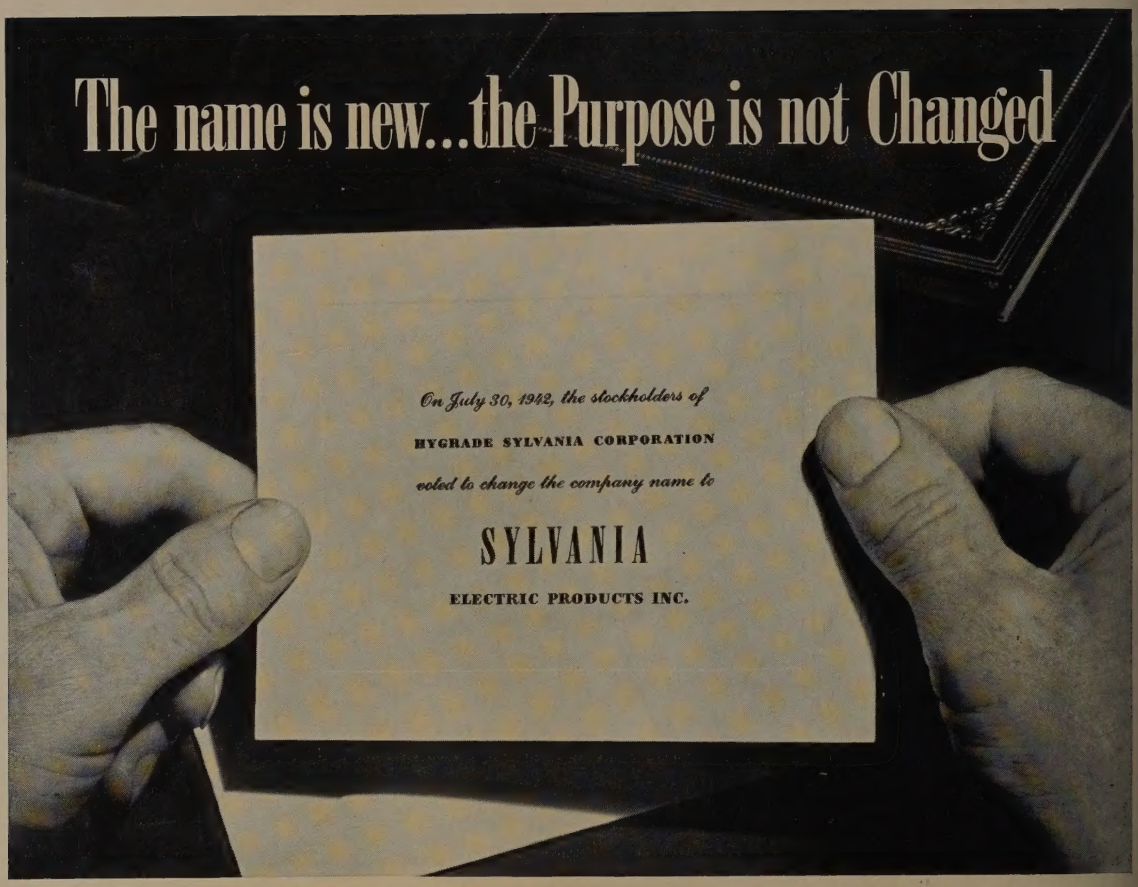

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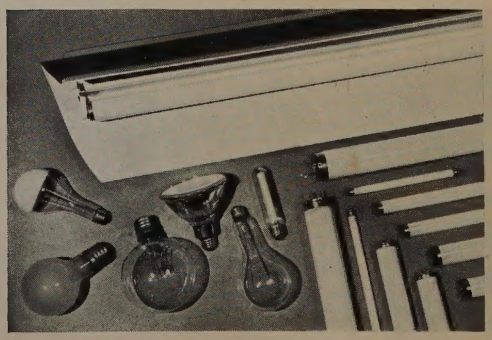

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